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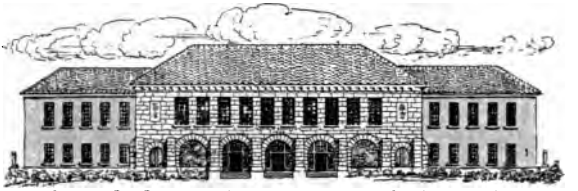

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TOPICS IN GEOGRAPHY

BY

W. F. NICHOLS, A.M.

PRINCIPAL HAMILTON SCHOOL, HOLYOKE, MASS.

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1889

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INTRODUCTION.

THESE Topics were prepared especially for the use of my own schools, and are therefore in every sense the product of the school-room. The cordial reception given to them on the part of teachers and superintendents now leads to their publication. In preparing the Topics for use I aimed:

First. To increase the value of geographical study, and at the same time shorten the time usually spent on the study.

Second. To show what to teach and what to omit.

Third. To give a brief outline for the scientific study of any continent as based upon structure or slope. Every continent should first be studied by this outline and then by the Topics.

Fourth. To present, as the title suggests, the whole subject by topics, and to have the topics presented always in the same order.

Fifth. To deal sparingly or not at all in statistics, but rather to have all areas taught by comparison.

Sixth. To make more prominent the natural curiosities and wonders, which are always interesting to pupils.

Seventh. To combine language and geography. For this purpose a language course is given for the primary grades, which by successive steps is preparatory for the regular work in geography. For the higher grades all the subjects suitable for language and object lessons are mentioned.

Eighth. To make it as free from errors as possible. It is impossible to make any work of this kind absolutely correct, for many facts which are true to-day will be untrue to-morrow.

I have divided the work up into grades to adapt it to our course of study; if it does not agree with the course used in other places, it is a very easy matter to change the divisions.

During the preparation I have consulted all the recent geographies and encyclopedias, and to all of them I am indebted for much valuable information.

It is earnestly hoped that the Topics may lead both teachers and pupils to better results in the important study of Geography.

W. F. NICHOLS.

HOLYOKE, May 1, 1889.

TOPICS IN GEOGRAPHY.

GRADE I.

To the teacher. Have talks with the children on subjects within their comprehension, preparatory to regular work in Geography, as form, size, position, etc., of common objects in or near the school-house. Train pupils to observe and describe the position of objects on the table or in the room, using terms right, left, front, back, front-right-hand corner, back-left-hand corner, middle, center.

Draw on the black-board the outline of the school-room, requiring the pupils to tell you where to place the representation of each object.

Teach the location and names of the streets near the school.

Require the pupils to tell through and across what streets they pass while coming to school.

Teach the direction in which the streets extend, that is, teach the cardinal and semi-cardinal points of the compass.

Show pictures, and relate real or imaginary journeys, using such words as forests, fields, hills, mountains, valleys, brooks, springs, rivers, trees, etc. Be sure that the children understand the words used.

Teach the names of the common fruits and grains, how they are planted, how they grow, how they are used or made into foods.

Teach in the same way the different kinds of native trees, and for what the wood is used.

Teach something about the character and uses of the common domestic animals.

Teach other similar topics. Let your work in this direction be limited only by the intellectual capacity of the children.

Give incidental lessons at appropriate times, as, about rain on rainy days, about clouds on cloudy days, about the sun on sunny days, about snow on snowy days, etc.

Encourage the little ones to bring into the school-room pretty leaves, pebbles, etc., and use them, when possible, in oral language, drawing, reading, and number lessons. Provide for the children's use a large sand-table upon which to play. Let sand and clay modeling form a large part of the busy work for the first year.

GRADE II.

To the Teacher: 1. Review the work of Grade I.

2. Show the necessity of a standard of measurement or scale as used in map-drawing.

3. Show the difference between a picture and a map.

4. Show the picture of a horse, and from it illustrate the fact that a picture or a map is sometimes larger and sometimes smaller than the object itself.

5. Have the pupils draw the school-room, school-yard, and locality. Scale one inch to the yard.

6. Teach the children how to tell the direction of one object from another in nature.

7. Teach how to tell the direction of the representations of objects in pictures and on maps from one another. Be sure that this point is clearly understood. Do not let the children think that one object is higher or above another because it is north of it.

8. The Earth. a. *Surface.* Show a picture and a map of the earth's surface. Draw from the children the fact that the surface is composed of land and water. In this connection be sure that the children really understand the character of the

map. The different marks used to represent the different features should be fully explained. Do not let them imagine that the different countries are colored in nature as they are on the map.

In teaching the names and definitions of the different bodies of water, employ the surroundings of the school-house, and lead from them to that which is more distant and unknown.

Take the class to the open fields by the side of a brook or river, where all terms used in geography can be easily taught.

Draw out from the children, by skillful questioning, definitions of all the forms observed. These definitions will always be original and frequently very apt. From the words of the children, used as a basis, teach the correct definition. Call the attention of the pupils to the following objects with their parts:

1. Hill
   - base,
   - slope,
   - summit.

2. Mountain
   - system,
   - range,
   - base,
   - slope,
   - summit,
   - peak,
   - volcano,
   - crater.

3. Plain
   - fields,
   - woods,
   - meadow,
   - swamp,
   - prairie,
   - desert.

4. Coast
   - beach,
   - cliff,
   - bluff,
   - cape,
   - peninsula,
   - promontory,
   - isthmus.

5. River
   - source,
   - branches,
   - banks,
   - bed,
   - current,
   - channel,
   - waterfall,
   - mouth.

6. Ocean
   - sea,
   - gulf,
   - bay,
   - harbor,
   - strait,
   - channel,
   - sound.

When it is not possible to take a delightful trip with the pupils, make a good use of pictures, black-board representations, and the sand-table.

b. *Productions.* Teach that the land produces plants, animals, and minerals; and the water produces fish, salt, sponges, coral, etc.

Here we find the need of a museum in every school. All the objects spoken of should be examined by the pupils, when possible. Pictures of the objects should also be shown; pictures, which show not only the object itself, but the object with its surroundings. Do more than exhibit the object or picture; ask questions about it until it is clearly understood.

c. *Motions.* Illustrate the daily and annual motions of the earth, showing the cause of day and night and the change of seasons.

d. *Zones.* Show pictures of the different regions of the earth's surface. In this way lead the children to see the different belts or zones of the earth's surface and how they differ from each other.

9. Read nice descriptions of warm countries, showing the peculiar characteristics of the plants, animals, and peoples who live there.

10. Describe cold countries in the same way. Use these descriptions as the basis for language work.

11. Have interesting talks upon the common minerals, productions, animals, races, wind, rain, snow, ice, clouds, the different employments, the materials used, and where they are obtained.

12. Let all your conversations on these subjects lead the children to a clear conception of the size, diversity, and beauty of this earth, and to the wisdom of its Creator.

13. All work done in this grade should be done as language work, remembering that these topics are not given as so many

facts to be scientifically taught, but are given rather as pleasant and interesting subjects for conversation.

GRADE III.

The Elementary Geography is usually placed in the hands of the pupils at the commencement of this grade. When this is done, it should be used only as a reading-book, never as a text-book to be studied. All the teaching should be done by the teacher, using largely home-made maps and pictures, gathered from all sources. Remember that a child's like or dislike of a very interesting study depends mainly upon a teacher's success in language and object lessons. A skillful teacher will awaken in every child a love of nature, a desire to travel and to read books of travel. Read to them such books as Miss Andrews' "Seven Little Sisters" and "Each and All."

I. Read the suggestions to Grade II., and enlarge on the topics given there.

II. CITY. — Draw a map indicating the position of the principal streets, canals, public buildings and parks. Show the position of the city in the township, and the course of any river. In language lessons teach: 1. Divisions into wards. 2. Occupations. 3. Railroads. 4. Government. 5. Water-works. 6. Fire department. 7. Public schools. 8. History.

III. COUNTY. — 1. Name and boundary.

2. Names of cities and towns in it.

3. Location of home city.

4. Location of county seat. Why so called?

5. Names of rivers in the county. Are they navigable? Do they furnish water-power? What is manufactured?

6. Have the pupils write letters, describing the county and city.

IV. THE EARTH. — 1. Review previous topics.

2. Teach meaning of sphere and hemisphere.

3. Show that the earth could be divided into land and water hemispheres.

4. Show northern and southern hemispheres, and that there is more land in the northern.

5. Show eastern and western hemispheres. Why called the Old and New World?

6. Continents. Name the six. Compare them in reference to size, position, shape, outline.

N. B. During the teaching of these topics you should have before your class a globe and a map of the world, that the picture of the continents and their position in reference to each other may be so often seen as to make a lasting impression on the memory. Prepare interesting lessons to be given at this point. Talk with the pupils about the different races, nations, animals, and productions, and point out the location of countries where each may be found. Lead the pupils to notice that animals live on the land, in the water, in cold countries, in warm countries, on mountains, in deserts, etc. Study the animals with a view of determining what peculiarity adapts the animals to their own surroundings. When this is done, the children will quickly associate the animal with the place and the place with the animal. The characteristics and peculiarities of plants should be studied in the same way; also the manners and customs of the people of the world.

V. — WESTERN HEMISPHERE, OR NEW WORLD.

1. Contains North and South America, part of Asia, and many islands.

2. Oceans: Arctic, Antarctic, Atlantic, and Pacific.

3. Seas, Gulfs, Bays, Straits: Bering, Caribbean, Mexico, Hudson, Baffin, Davis.

4. Rivers: Mississippi, Amazon.

5. Mountains: Rocky, Andes. Together the longest range in the world.

6. Islands: Greenland, Iceland, West Indies.

7. Teach the use of capitals, spelling and sentence-writing by dictating many such sentences as the following: The Mississippi river is the largest river in North America. It flows into the Gulf of Mexico.

VI. — EASTERN HEMISPHERE, OR OLD WORLD.

1. Contains Europe, Asia, Africa, Australia and many islands.

2. Oceans: Arctic, Antarctic, Atlantic, Pacific, Indian.

3. Seas, Gulfs, Bays: Mediterranean, Arabian, Bengal, Guinea.

4. Rivers: Danube, Nile, Congo, Yang-tse-Kiang.

5. Mountains: Alps, Himalaya, Atlas.

6. Language Lessons. Prepare many sentences like the following: The largest continent is Asia, but Europe and North America have the most important countries. There are five oceans. The Pacific is the largest, but the Atlantic is the most important. Have talks with the children about the different articles found for sale in the stores, where they are obtained, how they are brought here, what people produce them. In this way you can travel over the whole world during every lesson.

CONTINENT IN RELIEF.

The children are supposed to have had much practice in moulding the different forms in sand and clay. Sand modeling should now receive more attention and for a different reason. It is not expected that the teacher will make this subject as prominent in Grade III as in Grade V; but in all grades much should be done.

By sand modeling the clearest conception of slope or structure can be obtained.

1. Upon the general direction of the primary and secondary highlands depends the amount of rainfall of any section. The highest mountain ranges act as rain condensers; the lowest mountains or highlands serve as water partings, turning the waters of the continents into certain directions. Any change in either of these highlands would in many cases turn deserts into fertile fields and fertile fields into deserts.

2. The position of the plateaus, because it determines the rainfall and gives direction to the rivers, regulates the soil. The water disintegrates the rocks of the mountains, and constantly grinds the pebbles finer and sweeps all before it into the valleys, depositing it along its course according to its weight, the coarser material first, the finest and richest last.

3. The position and elevation of the plateaus and mountains also modify temperature. A good illustration of this can be seen in Mexico, where is found continual heat, perpetual springtime, and everlasting snow.

4. Upon the soil and climate must necessarily depend vegetation.

5. Upon vegetation animal life depends.

6. Upon production also depends commercial intercourse and the occupation of man.

A complete treatise on this subject can be found in Alex. E. Frye's "Child and Nature."

Before commencing the study of any continent by the Topics, a relief map should be studied with a view to determine the immediate relations existing between the various parts of the subject.

After each continent has been studied in relief, then review it according to the Topics; but the greater part of the matter given in the Topics can be brought out during the first study.

VII. — NORTH AMERICA.

1. Position. In what hemispheres? In what zones? How bounded?

2. Extent. Its length is nearly 5000 miles and its greatest breadth about 3000 miles.

3. Coast. North America is nearly the shape of a triangle and its northern and eastern coasts are very irregular, containing some of the finest harbors in the world. What is a harbor? What are its advantages?

a. *Oceans.* Arctic, Atlantic, Pacific.

b. *Seas.* Bering, Caribbean.

c. *Gulfs.* Mexico, St.Lawrence, California.

d. *Bays.* Baffin, Hudson.

e. *Straits.* Davis, Bering.

f. *Islands.* Newfoundland, West Indies, Aleutian, Greenland, Iceland. Greenland is probably the largest island in the world, though some think it is a cluster of islands frozen together. Why called Greenland? The discoverers hoped to persuade the people of Iceland to come there to live and in order to do so called it a beautiful and green land. It is really colder than Iceland.

g. *Peninsulas.* Aliaska, Florida, Lower California, Yucatan.

4. Surface. In North America we find the longest river, the largest lakes, the grandest cataracts, the most fertile valley in the world.

a. *Mountain Systems.* Appalachian, Rocky.

b. *Mountain Peaks* Mt. St. Elias is the highest.

5. Lakes. North America is noted for its numerous and great lakes. Locate: Superior, Michigan, Huron, Erie, Ontario, Great Bear, Great Slave.

6. Rivers. The Mississippi and the Missouri make the longest river in the world. The Mississippi river basin is the

largest in the world except the Amazon in South America. What is a river basin? Locate: Mississippi, Missouri, Mackenzie, Yukon, St. Lawrence, Columbia.

7. Climate. Every variety of climate is found within the limits of No. America. Here we find the cold of the frigid zone and the heat of the torrid zone.

8. Productions. a. *Agricultural.* In the northern part it is so cold that only mosses, lichens, and a few small birches can grow. In the central part wheat, corn, and tobacco are found. In the southern part we find cotton, sugar-cane, rice, oranges, and bananas.

b. *Mineral.* In North America are found more minerals than in any other grand division. Gold, silver, lead, copper, iron and coal are abundant.

9. Animals. In the Arctic regions are the whale, seal, walrus and white bear. In the Temperate regions are the domestic animals, also the grizzly bear, bison, deer. In the Tropical regions are alligators, monkeys, and birds of beautiful plumage.

10. Cities. Locate: New York, Philadelphia, Brooklyn, Boston, San Francisco, Chicago, Mexico, Quebec, Montreal.

11. History. About the year 1000, America was discovered by some people from Iceland. They soon left the country and nothing was gained by their discovery. In 1492 Columbus discovered some of the islands of the West Indies and a few years later he discovered the coast of South America, while John and Sebastian Cabot discovered the main-land of North America.

12. Language Lessons. Use topics 8, 9, and 11 for this purpose. Notice the great cold of the northern part and how hard it is for the inhabitants to gain a livelihood. Contrast their condition with that of the inhabitants of the West Indies. Compare the inhabitants of the different countries of North America in respect to their appearance, dress, houses, etc.

VIII. — UNITED STATES.

1. Position and boundaries.

2. Extent. From north to south about 1600 miles; from east to west about 2800 miles.

3. Coast. a. *Oceans.* Atlantic, Pacific.

b. *Gulfs.* Mexico.

c. *Bays.* Delaware, Chesapeake, San Francisco.

d. *Sounds.* Puget, Long Island.

e. *Capes.* Cod, Hatteras, Sable, Mendocino, Flattery.

f. *Peninsulas.* Florida.

4. Surface. a. Mountains. There are two mountain systems; Appalachian, or Eastern Highlands, Rocky, or Western Highlands.

b. Valley. The Mississippi river valley is next to the largest in the world and very fertile.

5. Lakes. Locate: Superior, the largest or next to the largest lake in the world, Michigan, Huron, Erie, Ontario, Great Salt.

6. Rivers. Locate: Mississippi, Missouri, Ohio, Rio Grande, Colorado, Columbia, and Hudson.

7. Climate. The climate is temperate, but warmer in the south than in the north; on the Pacific than on the Atlantic.

8. Productions. *Agricultural.* These are grain, potatoes, cattle and sheep from the central part; cotton, rice, sugar-cane, tobacco, oranges and lemons from the southern part; grain, fruit and cattle from the western states.

b. *Mineral.* The United States are rich in minerals. Gold and silver are found in nearly all the western states and territories. Iron and coal are common in nearly every part. The other minerals are lead, copper, zinc, salt and petroleum.

c. *Manufactured.* As a manufacturing nation the United States ranks first. The leading articles are agricultural im-

plements, boots and shoes, cotton and woolen goods, malt and distilled liquors, flour, sugar, etc.

9. Animals. The fox, wolf, wildcat, panther, and bear are found in the uncultivated regions. Alligators are found in the south. The domestic animals were brought here by the first settlers.

10. Occupations. The principal occupations are agriculture, manufacturing, mining and commerce. Explain the terms.

11. The largest cities are New York, Philadelphia, Brooklyn, Chicago, Boston, St. Louis, Baltimore, Cincinnati, San Francisco, New Orleans.

12. History. The United States was discovered by Sebastian Cabot in 1498. The first settlement was that of the Spaniards at St. Augustine in 1565. No English settlement was successful till Jamestown was settled in 1607. New York was next settled by the Dutch in 1614 and Massachusetts by the Puritans in 1620. Before long thirteen colonies were settled. These were subject to England till they declared their independence July 4, 1776, and won it by the Revolution. Since that time our government has been prosperous.

13. Language lessons. For reproduction read interesting stories about the trials of the early settlers and their manner of life. You know not how much a child's mind can retain, nor what a desire for historical information may be awakened.

Give object lessons on the productions, animals, etc.

IX.—British America.

1. Boundaries.

2. Coast. The coasts are very irregular, yet its harbors are not as good as those of the United States. Why?

a. *Oceans.* Arctic, Atlantic, Pacific.

b. *Gulf.* St. Lawrence.

c. *Bays.* Hudson, James, Baffin.

d. *Straits.* Hudson, Davis, Bering.

e. *Islands.* Newfoundland.

3. Surface. There are extensive plains in the center and east, mountains in the west.

a. *Mountain Ranges.* Rocky, Coast.

4. Lakes. The lakes are very numerous, and contain many valuable fish. The largest lakes are Winnepeg, Great Bear, Great Slave, Athabasca.

5. Rivers. St. Lawrence, Mackenzie.

6. Soil and Climate. The southern part of British America is similar to the northern part of the United States, but in the northern part of British America deep snow covers the ground for most of the year.

7. Productions. a. *Agricultural.* The climate is too cold for much to grow, except wheat. The principal productions are therefore fish, oil, furs and lumber.

b. *Mineral.* British America is rich in the quantity and variety of its minerals. The most important are iron, lead, tin, copper, silver.

8. Animals. Bears, deer, wolves, beavers, otter, etc., are numerous.

9. Occupations. The chief occupations are farming, fishing, hunting and lumbering. The Newfoundland Banks are the finest fishing grounds in the world.

10. Cities. Montreal, Toronto, Quebec, Victoria.

11. Object Lessons. Imaginary journeys and descriptions of pictures will furnish suitable work for language. For object lessons: Beaver, Otter, Wolves, Snowshoes, Suspension Bridge, Welland Canal.

X. — MEXICO AND CENTRAL AMERICA.

1. Locate. In what part of North America? In what zone?

2. Coast. Has few harbors.

Locate: a. *Ocean.* Atlantic.

b. *Sea.* Caribbean.

c. *Gulfs.* Mexico and California.

d. *Cape.* San Lucas.

e. *Peninsulas.* Yucatan, Lower California.

3. Surface. The eastern coast is low, but the ground gradually rises to snow-capped mountains. The mountains are a continuation of the Rocky Mountain System. The highest peak is the volcano Popocatepetl.

4. Lakes. The most important lake is Nicaragua.

5. Rivers. There are few rivers and these are not navigable beyond tide-water.

6. Climate. There are two seasons, dry and wet. Trees and plants bear fruit and flowers all the year. What different climate would you find in going from the coast to the top of the mountains?

7. Productions. All the products of the different zones can be found in Mexico. Why? The most important productions are fruits, cotton, sugar, indigo, cacao, cochineal, valuable woods, as mahogany, ebony, and logwood. In the mountains are valuable mines of silver, gold, copper, lead, and quicksilver.

8. Animals. These are monkeys, porcupines, ant-eaters.

9. Occupation. Mining is the chief occupation.

10. Cities. Mexico is situated in a beautiful valley surrounded by snow-capped mountains. Puebla, called "the city of angels," is noted for its numerous and elegant churches, and for the beauty of its situation.

11. Language and Object Lessons. Comparison of Mexico with the United States and British America, descriptions of pictures and imaginary journeys, the history of the old city of Mexico, with its temples and floating gardens, are

excellent subjects for compositions. For object lessons use the following topics: monkeys, cochineal, porcupines, etc.

GRADE IV.

I. — MASSACHUSETTS, OR HOME STATE.

To the Teacher: Study first a relief map as indicated on page 11. Determine why the cities are situated where they are.

1. Draw a progressive map, that is, first draw the outline, then as each topic is studied indicate it upon the map. Indicate also the boundaries. For this purpose use the progressive outline maps, published by D. C. Heath & Co.

2. Counties. Number, names and position.

3. Coast. This is quite broken, furnishing excellent and numerous harbors. The harbor of Boston is one of the safest and best in the world. Locate: —

a. *Ocean.* Atlantic.

b. *Bays.* Massachusetts, Cape Cod, Buzzards.

c. *Capes.* Ann, Marblehead, Nahant, Hull, Cod.

d. *Islands.* Nantucket, Marthas Vineyard.

4. Surface. Locate: a. *Mountain Ranges.* Hoosac, or Berkshire Hills, and Taconic.

b. *Mountain Peaks.* Greylock, highest in the state; Wachusett, Holyoke, Tom, Everett.

5. Rivers. Locate the Connecticut, with its four tributaries, viz., Chicopee, Westfield, Deerfield, Millers. Locate also the Merrimac, Housatonic, Charles, Blackstone.

6. Soil. It is generally poor except in the river valleys.

7. Climate. The winters are long and cold; the summers are warm, with occasional periods of great heat; the autumns are delightful.

8. Productions. a. *Agricultural.* These are grain, vegetables and fruit; tobacco in the Connecticut valley.

b. *Mineral.* Iron and marble are found in Berkshire; lead containing silver is found near Newburyport; granite at Quincy and Cape Ann.

c. *Manufactured.* In proportion to its population Massachusetts excels every other state in the amount and value of its manufactures. It is the first state in the manufacture of cotton and woollen goods, boots and shoes, and paper.

9. Commerce. Massachusetts ranks next to New York in the extent of its commerce. The principal ports are Boston, New Bedford and Gloucester. A very large domestic commerce is carried on by the numerous railroads.

10. Occupations. The people are engaged in agriculture, manufacturing, commerce and fishing. In fishing Massachusetts ranks first. Cod and mackerel are found on the coast. Gloucester and New Bedford are interested in fishing.

11. Government. Each year the people elect men to make our laws, who meet in the capitol at Boston. There are 40 senators and 240 representatives. Together they are called the Legislature. Every year also the people elect a Governor and a Council of eight men, a Lieutenant-Governor, Secretary, Treasurer, Auditor and Attorney-General. These men execute the law. There are also judges, who are to preside over the courts, and to pronounce sentence upon any one who is convicted of breaking the law. These men are appointed by the Governor and Council.

12. Education. In education Massachusetts has always taken a leading place. There is a State Board of Education of eight members, which has the general oversight of all the schools.

Of the many colleges in Massachusetts, the most important are Harvard, Amherst, Williams, Boston University, Holy Cross, Tufts, Smith, Wellesley.

13. Cities. Boston is the capital of Massachusetts and the

largest city in New England. It is the fifth city in population in the United States, and as a commercial city it ranks next to New York. Lowell is the principal manufacturing city in Massachusetts. Its most important manufactures are cotton and woolen goods, and carpetings. Worcester, the second largest city in the state, is a manufacturing city situated nearly in the centre of the state. Cambridge contains Harvard University, the oldest college in the United States. Here Washington took command of the American army at the commencement of the Revolution. Fall River and Lawrence are large cotton and woolen manufacturing cities. Lynn is the largest boot and shoe manufacturing city in the world. Springfield contains the largest United States arsenal and armory. Other cities are Salem, New Bedford, Somerville, Holyoke, Chelsea, Taunton, Gloucester, Haverhill, Newton, Fitchburg, Northampton, Pittsfield.

14. History. Read interesting stories for reproduction on the following topics: The Pilgrims, why they came? their landing, their early sufferings, their relation with the Indians, their character; King Philip's War; Massachusetts in the Revolution; Boston Massacre; Boston Tea Party; Battle of Lexington; Battle of Bunker Hill; Boys on Boston Common.

II. — NEW ENGLAND STATES.

1. Names of the states in the group.

2. Boundaries of the group.

3. Coast. The coast is much indented by numerous bays. What are their advantages? Locate: a. *Ocean.* Atlantic.

b. *Bays.* Penobscot, Massachusetts, Cape Cod, Narragansett.

c. *Sound.* Long Island.

d. *Cape.* Cod, Quoddy Head, the extreme eastern point of the United States.

e. *Islands.* Marthas Vineyard, Nantucket, Mount Desert, Block.

4. Surface. Along the coast the surface is low and level, but in the interior it is mountainous.

a. *Mountain Ranges.* Locate: Green, White, Hoosac, Taconic.

b. *Mountain Peaks.* Locate: Washington, the highest in New England, Katahdin, Mansfield, Greylock.

c. *Valleys.* The Connecticut Valley is the largest and most fertile in New England.

5. Lakes. Locate: Moosehead, Memphremagog, Winnipiseogee, Champlain.

6. Rivers. There are many rivers, nearly all affording valuable water-power. Locate: St. Croix, Penobscot, Kennebec, Androscoggin, Merrimac, Connecticut, Charles.

7. Soil. The soil is poorly fitted for farming. Why? The river valleys are fertile.

8. Climate. The climate is changeable, having long, cold winters, but hot summers.

9. Productions. *Agricultural.* Hay, wheat, corn, oats, potatoes and dairy products are produced. The chief fruits are apples, pears, peaches, plums, strawberries, currants and cranberries.

Mineral. Granite, marble, limestone and slate are found in great quantities.

Manufactured. The New England states are celebrated for the variety of their manufactures. The most important are cotton and woolen goods, boots and shoes, cutlery, sewing machines, furniture, paper.

10. Commerce. It is very extensive. The exports are grains, ice, granite and manufactured goods. The imports are wool, hides, rags, coal, wheat, and tropical fruits.

11. Occupations. These are fishing, manufacturing, quarrying, lumbering and ship-building.

12. Cities. *Maine.* Augusta is the capital and Portland the largest city and principal seaport.

New Hampshire. Concord is the capital and Manchester the largest city.

Vermont. Montpelier is the capital and Burlington the largest city. Rutland, noted for its granite quarries, is the largest town.

Massachusetts. Boston is the capital and largest city. Lowell manufactures more cotton goods than any other city in the United States. Other important cities are Worcester, Lynn, Springfield, and Fall River.

Rhode Island. There are two capitals, Providence and Newport. The first is also the largest city, the other a popular summer resort.

Connecticut. Hartford is the capital, and New Haven the largest city.

13. History. New England was named by Capt. John Smith who explored the coast. It was settled by Puritans who fled from England on account of religious persecution. They came in the Mayflower and landed at Plymouth, Dec. 22, 1620. The first settlement in Connecticut was made by emigrants from Massachusetts. Roger Williams made the first settlement in Rhode Island. The Puritans suffered greatly because the winter was so cold and the Indians were so cruel. Massasoit was a friendly Indian. How did he help the settlers? King Philip hated the whites. Read King Philip's war. The New England states took an active part in the Revolutionary War. Read about the battles of Lexington and Bunker Hill.

14. Language Lessons. Have the pupils write letters to each other describing imaginary journeys. Use the following topics for reproduction lessons: The sufferings of the Puritans, John Smith, Green Mountain Boys, Revolution, The rivers of New England, etc.

III.— MIDDLE ATLANTIC STATES.

1. Names of the States.

2. Boundaries of the group.

3. Coast. It is low and sandy, bordered with wave-formed islands.

a. *Ocean.* Atlantic.

b. *Bays.* New York, Delaware, Chesapeake.

c. *Capes.* May, Henlopen.

d. *Islands.* Long, Manhattan, Staten, Thousand Isles.

4. Surface. a. *Mountain Ranges.* Alleghany, Blue, Adirondacks, Catskills.

5. Lakes. Erie, Ontario, Champlain, George.

6. Rivers. Hudson, Delaware, Susquehanna, Potomac, Alleghany, Monongahela, Ohio.

7. Soil. Quite fertile and well adapted to the cultivation of grain, fruit and vegetables.

8. Climate. It is cold in northern New York but quite warm in Maryland.

9. Productions. a. *Agricultural.* Wheat, rye, oats, barley and hops are found in New York; grain, hay and tobacco in Pennsylvania. New Jersey and Delaware are noted for garden vegetables.

b. *Mineral.* Nearly all the mountains are rich in iron, coal and petroleum. Other minerals are zinc and salt. Pennsylvania furnishes two-thirds of all the coal and three-fifths of all the iron in the United States.

c. *Manufactured.* New York ranks first in the United States, and Pennsylvania second. The most important manufactures are machinery, cotton and woolen goods, paper, books and hardware.

10. Commerce. A large amount of domestic commerce is carried on by means of railroads, canals, lakes and rivers. New York has nearly as much foreign commerce as all the other cities together.

11. Occupations. Agriculture is the chief employment, but many are engaged in commerce, manufacturing and mining.

12. Cities. *New York.* Albany is the capital; New York is the largest city in the United States, while Brooklyn is the third in size in the United States.

New Jersey. Trenton is the capital and Jersey City the largest city.

Pennsylvania. Harrisburg is the capital, Philadelphia is the second largest city in the United States, and Pittsburg is the center of the iron manufacturing in the United States.

Delaware. Dover is the capital and Wilmington the largest city.

Maryland. Annapolis is the capital and Baltimore the largest city. Washington is the capital of the United States.

13. History. New York and New Jersey were settled by the Dutch; Pennsylvania by the Dutch, Swedes, and English Quakers. Read something about the Quakers, and about Wm. Penn. Delaware was settled by the Swedes; Maryland by the English. These colonies grew rapidly. It was in this region that most of the fighting was done during the Revolution.

14. Language Lessons. Give object lessons on the productions. For reproduction use such topics as: Falls of Niagara, Falls of Trenton, the origin of coal, the life of miners, the Erie Canal, the Battles of the Revolution. For dictation, many sentences like the following: This group of states contains the three largest cities in the United States. These are, New York, Philadelphia and Brooklyn. Pennsylvania excels all the states in the production of iron, steel, coal and petroleum.

IV. — SOUTH ATLANTIC STATES.

1. Names of the States.

2. Boundaries of the group.

3. Coast. Every part of the coast is low and flat. The coast of North Carolina is dangerous to navigation because of

shoals, and the islands which have been formed by the waves. What are shoals?

Locate: a. *Ocean.* Atlantic.

b. *Bay.* Chesapeake.

c. *Sounds.* Pamlico, Albemarle.

d. *Capes.* Charles, Henry, Hatteras, Sable.

e. *Islands.* Florida Keys. This is a group of coral islands, inhabited by fishermen and tobacconists.

4. Surface. Nearly all of this section belongs to the Atlantic Slope.

a. *Mountain Ranges.* Appalachian System. The most important ranges are the Alleghany, Blue, Cumberland, Iron or Smoky.

b. *Mountain Peaks.* Mitchell, highest east of the Mississippi River.

5. Lakes. The lakes of Florida are numerous and noted for their transparency. Okeechobee is the largest.

6. Rivers. The most important rivers are the Ohio, Potomac, James, Roanoke, Santee, Savannah, St. Johns.

7. Soil. Some of the richest soil in our country is found in this group of states.

8. Climate. In the northern part it is temperate, in the southern part almost tropical. Along the coast it is hot and in many places unhealthy. In Florida it is warm even in winter.

9. Productions. a. *Agricultural.* In this group of states are large forests of yellow pine from which is obtained nearly all the tar, pitch and turpentine used in the United States. South Carolina is noted for its rice and Florida for its oranges. Tobacco, rice, cotton, corn and sweet potatoes are the chief productions.

b. *Mineral.* Large quantities of coral are obtained from Florida.

c. *Manufactured.* These are not very important, though gradually increasing.

10. Occupations. Agriculture is the chief employment.

11. Cities. *Virginia.* Richmond is the capital and largest city, and Norfolk is a seaport.

North Carolina. Raleigh is the capital and Wilmington the largest city.

South Carolina. Columbia is the capital and Charleston the largest city.

Fort Sumter guards its harbor. Why important?

Georgia. Atlanta is the capital and largest city Savannah is an important seaport.

Florida. Tallahassee is the capital and Key West is the largest city, and noted for its sponge fisheries and tobacco manufactures. St. Augustine is the oldest settlement in the United States. Santa Fé was a thriving native village when St. Augustine was settled.

12. History. Virginia is the oldest of the states. It was settled at Jamestown in 1607. Georgia was the last settled of the thirteen states.

13. Language and Object Lessons. Relate stories for reproduction about Captain John Smith, Pocahontas, Ponce-de-Leon, the Natural Bridge. For object lessons use any of the following: coral, cotton, sponge, oranges, alligators, mocking-birds. Have the pupils write descriptions of imaginary journeys.

V. — SOUTH CENTRAL STATES.

1. Names of the States.

2. Boundaries of the group.

3. Coast. Only two states of this group have any sea-coast.

a. *Gulf.* Mexico.

b. *Bay.* Mobile.

4. Surface. Mountain Ranges. These are the same as in the South Atlantic States: Alleghany, Cumberland, Blue, Iron or Smoky.

5. Rivers. There are many and important rivers. The most important are Mississippi, Ohio, Tennessee, Cumberland, Mobile.

6. Soil. Here we find very fertile soil.

7. Productions. In the hilly sections, cattle, sheep and horses are raised. Kentucky is noted for its horses and tobacco. Mississippi produces more cotton than any other state.

8. Commerce. Commerce is easily carried on by means of navigable rivers.

9. Cities. *West Virginia.* Charleston is the capital and Wheeling the largest city.

Kentucky. Frankfort is the capital and Louisville the largest city, noted as being the largest tobacco market in the world. It has one of the deepest artesian wells in the world. What is an artesian well?

Tennessee. Nashville is the capital and largest city. Memphis is an important commercial city.

Alabama. Montgomery is the capital and Birmingham the largest city. Mobile is an important city and port, and ranks next to Birmingham in population, if it does not surpass it.

Mississippi. Jackson is the capital and Vicksburg the largest city.

10. Object and Language Lessons. For language lessons write a nice description of any of the following: journeys, tobacco, cotton, artesian wells, rice, levees, Mammoth Cave.

VI. — North Central States.

1. Names of the States.

2. Boundaries of the group.

3. Coast. This group of states has no sea-coast, but a very extensive lake-coast.

a. *Bays.* Saginaw, Green.

b. *Strait.* Mackinac.

4. Surface. The surface is level, consisting of prairies and rolling lands. In the vicinity of Lake Superior the surface is more rugged.

5. Lakes. The lakes are Erie, Huron, Superior, Michigan and St. Clair.

6. Rivers. The most important rivers are the Mississippi, Ohio, Scioto, Wabash, Illinois.

7. Soil. With the exception of the northern part of Michigan, these states have some of the most fertile soil found in the United States.

8. Climate. It is very cold in winter and very warm in summer.

9. Productions. a. *Agricultural.* The leading productions are corn, wheat, oats, rye and potatoes. Illinois produces more wheat and corn than any other state. Michigan and Wisconsin produce a great deal of lumber.

b. *Mineral.* The iron and copper mines of Michigan are very valuable. Illinois has much coal.

c. *Manufactured.* The manufactures are chiefly agricultural implements, furniture, lumber and flour.

10. Commerce. This is carried on by means of the numerous canals and rivers.

A person can start from any of the lake ports and reach the Atlantic Ocean, travelling wholly by water, by six different ways. Describe the ways.

11. Occupation. The chief business is agriculture; though there is much manufacturing in Ohio, Indiana and Illinois.

12. Cities. *Ohio.* Columbus is the capital, Cincinnati the largest city, and Cleveland an important lake port.

Indiana. Indianapolis is the capital and largest city.

Illinois. Springfield is the capital. Chicago is the greatest grain and pork market in the world. By the census of 1880, it was the fourth city in size, its estimated population now makes it the second city in size in the United states.

Michigan. Lansing is the capital; Detroit the largest city and an important lake port.

Wisconsin. Madison is the capital. Milwaukee, the largest city, is an important lake port.

13. Object and Language Lessons. The following are suitable topics for language lessons: Journeys, Pictured Rocks, Blizzards, The Lost River in Indiana, Canal Locks, Mounds and Mound-Builders, Views on a Wheat Farm.

VII. — WEST CENTRAL STATES.

1. Names of the states.

2. Boundaries of the group.

3. Coast. Of this group Louisiana alone has sea-coast. How do the inhabitants of the other states reach the sea?

4. Surface. The surface is very level. The only mountains are the Ozark in Missouri.

5. Lakes. There are many small lakes in Minnesota and Louisiana. The most important are Pontchartrain, Superior, Lake of the Woods, Glazier or Elk, the source of the Mississippi river.

6. Rivers. The largest are the Mississippi, Arkansas, Missouri and Red.

7. Soil. It is rich and fertile.

8. Productions. a. *Agricultural.* Minnesota has large forests of pine. Wheat and corn are produced in Minnesota, Iowa and Missouri; while cotton and sugar are produced in Arkansas and Louisiana. Louisiana ranks first in the production of sugar.

b. *Mineral.* Coal, iron and lead are found in Iowa and Missouri. One of the largest deposits of iron in any one place is found in the Iron Mountains and Pilot Knob in Missouri.

c. *Manufactured.* The chief article of manufacture is flour. Minneapolis and St. Louis both have large flouring mills.

9. Cities. *Minnesota.* St. Paul is the capital and Minneapolis the largest city and flour-manufacturing centre.

Iowa. Des Moines is the capital and largest city.

Missouri. Jefferson City is the capital. St. Louis is the largest city wholly in the Mississippi Valley. It is connected with Illinois by the finest bridge across the Mississippi.

Arkansas. Little Rock is the capital and largest city.

Louisiana. Baton Rouge is the capital. New Orleans, the largest city, is built on marshy ground, and has no cellars. It is the first cotton-market in the world. As many as 1200 steamboats can sometimes be counted at once, loading or unloading.

10. Language and Object Lessons. Continue the comparison of the different groups of states in reference to all the topics. Continue imaginary journeys. Describe any natural curiosities, as Hot Springs of Arkansas, height of land.

VIII. — STATES OF THE PLAINS.

1. Names of the states.

2. Boundaries of the group.

3. Coast. Texas only has a sea-coast.

a. Galveston Bay. *b.* Island. Galveston.

4. Surface. The land gradually rises as we go towards the mountains. The Black Hills are the only mountains.

5. Rivers. Missouri, Kansas, Arkansas, Rio Grande, Red.

6. Productions. The productions are corn and wheat in the northern part; cotton, rice, sugar and cattle in the southern part. Texas is noted for its cattle-ranches.

7. Cities. *Dakota.* Bismarck is the capital. Dakota has been divided into two parts, called North and South Dakota.

Nebraska. Lincoln is the capital.

Kansas. Topeka is the capital.

Texas. Austin is the capital, and Galveston the largest city and sea-port.

8. Object and Language Lessons. Compare the Black Hills with the Alleghany Mountains; the Missouri river with the Hudson; this group of states with the others in reference to all topics. Continue imaginary journeys, describing scenery. For language lessons use pictures and descriptions of the following topics: Indians, Bad Lands, Devil's Lake in Dakota, Cow-Boys.

IX. — WESTERN STATES. *Rocky Mountain Division.*

1. Names of states.

2. Boundaries of the group.

3. Surface. As the name indicates, the surface is mountainous. The Rocky mountains extend through them all. Sierra Blanca is the highest peak. Other celebrated peaks are: Pike's, Long's, and Lincoln.

4. Rivers. Missouri, Yellowstone, Rio Grande.

5. Productions. a. *Agricultural.* Farming can be carried on only by irrigation. What is irrigation? Stock-raising is very important. Cattle remain out all the year.

b. *Mineral.* Gold, silver, iron, lead, coal, copper and tin are found in nearly all these states. The mines of gold and silver are among the richest in the world. Colorado is the first state in the Union in the production of silver.

6. Occupation. Mining and stock-raising are the chief occupations.

7. Cities. *Montana.* Helena is the capital.

Wyoming. Cheyenne is the capital.

Colorado. Denver is the capital. Leadville is one of the highest towns in the country.

New Mexico. Santa Fe is the capital.

8. Language Lessons: journeys, comparisons, gold-mining, National Park.

X. — WESTERN STATES. *Basin Division.*

1. Names of the states.

2. Boundaries of the group.

3. Surface. It is very mountainous. The most important mountains are the Wasatch.

4. Lakes. There are many small lakes in this group. Many of them are salt. Great Salt Lake is the largest.

5. Rivers. Snake, Colorado.

6. Soil. Barren and dry. Why?

7. Productions. Throughout this group the amount of the agricultural products depends upon irrigation. In Utah, especially, grain and fruit are produced in large quantities.

Much gold and silver is found, particularly in Nevada, which also contains large quantities of rock-salt.

8. Climate. The climate, except in the north, is dry, and therefore good for consumptives. Arizona is said to have the hottest climate in the United States.

9. Cities. *Idaho.* Boise City is the capital.

Utah. Salt Lake City is the capital.

Nevada. Carson is the capital.

Arizona. Prescott is the capital. Some authorities now give Phœnix.

10. Language and Object Lessons. Continue comparisons and imaginary journeys. Suitable topics for language work are: Great Salt Lake, the Mormons, cañons of the Colorado, bisons.

XI. — WESTERN STATES. *Pacific Division.*

1. Names of the states.

2. Boundaries of the group.

3. Coast. The Pacific coast is much less broken than the Atlantic. There are some good harbors, that of San Francisco being the largest.

a. *Ocean.* Pacific.

b. *Bay.* San Francisco. c. *Sound.* Puget.

d. *Strait.* Juan de Fuca. e. *Capes.* Flattery, Mendocino.

f. *Islands.* Santa Barbara.

4. Surface. a. *Mountain Ranges.* Sierra Nevada, Cascade, Coast.

b. *Peaks.* Whitney is the highest in the United States, not including those of Alaska. Tacoma, Shasta, Tyndall, are important peaks.

5. Rivers. Columbia, Colorado, Sacramento, San Joaquin.

6. Soil. The soil of the river valleys, particularly of California, is fertile.

7. Climate. It is much warmer than corresponding places on the Atlantic coast. Why?

8. Productions. California is noted for its fruit and vineyards; it is also one of the leading wheat and wool-producing states. California is first in the Union in the production of gold. The quick-silver mines are the richest in the world.

9. Occupations. Agriculture and mining are the chief occupations. Many people are engaged in raising silk-worms and ostriches.

10. Cities. *Washington.* Olympia is the capital.

Oregon. Salem is the capital and Portland the largest city.

California. Sacramento is the capital and San Francisco the largest city. It manufactures silk goods, cigars, boots and shoes.

11. Language and Object Lessons. Journeys and comparisons as usual. Other topics are: Yosemite Valley, salmon in Columbia, big trees, ostrich, grapes, raisins, discovery of gold, Chinese, the Golden Gate.

XII. — SOUTH AMERICA.

First the relief map as suggested on page 11.

1. Location and boundaries.

2. Coast. The coasts of South America are more regular than those of North America.

a. *Oceans.* Atlantic, Pacific.

b. *Sea.* Carribbean.

c. *Gulf.* Guayaquil.

d. *Strait.* Magellan.

e. *Capes.* Gallinas, St. Roque, Horn, Parina.

f. *Islands.* Falkland, Tierra del Fuego ("Land of Fire"), Marajo, Juan Fernandez.

3. Surface. South America is noted for its long and lofty range of mountains and its volcanoes. The Andes range is the most important. It is near the Pacific Coast, so that from the water it looks like a snow-capped wall. There are sixty active volcanoes. The highest mountain peaks are Sorato, Aconcagua, Chimborazo.

4. Plains. In the valley of the Amazon are dense forests called Selvas; in the valley of the Orinoco are grassy plains called Llanos; in the valley of La Plata are grassy plains called Pampas. All are covered with countless herds of cattle and other animals.

5. Lakes. Titicaca is the largest; it is one of the highest in the world. Lake Maracaybo is sometimes called a gulf.

6. Rivers. Amazon is the largest in the world; its mouth is 180 miles wide. Locate also Orinoco, La Plata.

7. Soil. South America has probably the most fertile soil of any country in the world, due to the warm climate and great rain-fall.

8. Climate. South America is chiefly in the Torrid Zone, and has but two seasons, — the wet in Winter (June, July, August); dry in Summer (Dec., Jan., Feb.).

9. Productions. a. *Agricultural.* These are palm, Peruvian bark, caoutchouc or India rubber, coffee, cotton, indigo, and the valuable woods.

b. *Mineral.* Brazil furnishes many diamonds. Emeralds are found in South America, also copper, iron, and lead.

10. Animals. These are tapir, ant-eater, llama, jaguar, monkey, alligator, condor, parrots and serpents. The birds are noted for their brilliant plumage.

11. Inhabitants. The greater part of the inhabitants are descendants of the native Indians but partly civilized.

12. Cities. Buenos Ayres is the largest city in South America. Rio Janeiro is an important city and seaport. Locate also Santiago and Montevideo.

13. Language and Object Lessons. The following are a few of the many topics suitable for this work: Stories of the discoverers, Columbus, Balboa, Magellan, Pizarro; stories of life in the Andes, on the Selvas, Llanos, Pampas; snakes and alligators, where are they in the dry season? the "bore" of the Amazon; how rubber is procured; hides, tallow and horns, what is made from each? earthquakes, ostrich, diamonds, armadillo, and all the other animals, etc. Comparisons of North and South America in reference to all the subjects. Descriptions of pictures and journeys as usual.

XIII. — EUROPE.

To the teacher: It will probably be too difficult for your pupils to make a relief map. You should make one for study. The structure of Europe is of great importance.

1. In what hemisphere? In what zone? Boundaries.

2. Coast. Europe has the most irregular coast-line of all the continents.

a. *Oceans.* Arctic, Atlantic.

b. *Seas.* Mediterranean, Adriatic, Black, Caspian, North, Baltic.

c. *Gulf.* Bothnia.

d. *Bay.* Biscay.

e. *Channels and Straits.* English, Dover, Gibraltar.

f. *Capes.* North, Tarifa, St. Vincent.

g. *Islands.* British Sicily, Sardinia, Corsica, Candia, Cyprus.

h. *Peninsulas.* Scandinavian (Norway and Sweden), Iberian (Spain and Portugal), Balkan (Turkey and Greece), Italian.

3. Surface. The countries which border on the Mediterranean are high and mountainous; those which border on the North and Baltic are low and level. The most mountainous country is Switzerland; the lowest is Netherlands.

a. *Mountain Ranges.* Pyrenees, Alps, Carpathian, Scandinavian.

b. *Peaks.* Elboorz, the highest in Europe, Blanc.

4. Lakes. There are many lakes in Europe, but they are not as large as those of the United States. Lake Ladoga, the largest, is about the size of Lake Ontario.

5. Rivers. There are many important rivers in Europe, but they are not as long as those of the United States. The Volga is the longest, not quite one-half the length of the Mississippi. The other important ones are the Danube, Dnieper, Rhine, Don.

6. Soil. It is not as fertile as that of the United States, but is very productive because of the mild climate, except in the northern part.

7. Climate. The climate is mild in the west and severe in the east. Notice how the Gulf Stream and the mild winds from the south make the climate of Europe warmer than portions of the United States, though farther south.

8. Productions. a. *Agricultural.* These depend upon the part of Europe that we examine. In the far north are mosses and shrubs; in the middle portions are forests, vineyards and grains; in the southern portion are oranges, lemons, figs and olives.

b. *Mineral.* Europe is less rich in minerals than the United States, though coal, iron, lead tin, etc., are found in large quantities.

c. *Manufactured.* The nations of Europe rank first in manufacturing. Read about the different manufactures of the different nations as: French, perfumery, silks, wines and articles of fashion; Germans, guns, and all kinds of iron and steel articles.

9. Occupation. Agriculture, manufacturing and commerce are the important occupations.

10. Cities. London is the largest city in the world. Liverpool is noted for its commerce. St. Petersburg is the capital of Russia. Berlin is the capital of Germany. Paris is the capital of France. Vienna is the capital of Austria. Rome is the residence of the Pope and contains the largest church in the world, that of St. Peter's.

11. Nations. The four most important nations are Great Britain, Germany, France and Russia.

12. Language and Object Lessons. Have the pupils write descriptions of imaginary journeys, describing the beautiful scenery, showing some of the peculiar customs of the people, describing the new products, beautiful churches, delightful ruins, etc. Make out many journeys like the following for the pupils to fill out: On a voyage from ——, the largest city in the world, to Italy, we crossed the —— Channel, sailed on the —— Ocean, entered the strait of ——, sailed on the —— Sea, and visited the largest church in the world at ——. The following are a few of the many topics for language lessons: Mt. Blanc, monks of Mt. St. Bernard, glaciers, avalanches, silk and silk-worms, dikes and wind-mills in Holland, travelling in Lapland.

XIV. — Asia.

To the teacher: Let the class study the relief map. If this is done well, you will not find it necessary to commit to memory the text-book on the topics of surface, soil, climate or productions.

1. Hemispheres? Zones? Boundaries?

2. Extent. Largest of all the grand divisions, containing one-third of all the land of the globe.

3. Coast. The coast is very irregular and contains many large seas and harbors.

a. *Oceans.* Arctic, Indian, Pacific.

b. *Seas.* Bering, Okhotsk, Japan, Yellow, China, Arabian, Red, Mediterranean, Black, Caspian.

c. *Gulfs and Bays.* Persian, Bengal.

d. *Straits.* Bering, Corea, Malacca, Ormus, Bab-el-Mandeb.

e. *Capes.* Chelyuskin, East, Romania.

f. *Islands.* These are many and important. The Empire of Japan consists of four large islands and 3850 small ones. Ceylon and Formosa are also important islands.

g. *Peninsulas.* Kamchatka, Corea, Malay, Hindoostan, Arabian.

4. Surface. In the center is an immense plateau, consisting of lofty mountains, vast deserts, and plains.

a. *Mountain Ranges.* Himalaya, "abode of snow," loftiest mountain-range in the world; Altai, "golden mountain."

b. *Peaks.* Everest is the highest, or next to the highest peak in the world, more than five miles high. Many other peaks in the Himalaya range are nearly as high. How does this range compare with the Rocky of America?

c. *Plains.* There are many deserts in the western and central parts of Asia.

5. Lakes. The lakes are few, small and unimportant.

6. Rivers. Lena, Hoang Ho or Yellow, Yang-tse-Kiang, Ganges, Obe, Yenisei, Indus and Euphrates.

7. Soil. India and China have a fertile soil. The rest of Asia contains very little good soil except in the river valleys.

8. Climate. There is every variety of climate. In some places in northern Siberia the ground is always frozen, while Mecca is called the hottest place on earth.

9. Productions. a. *Agricultural.* In the frozen regions of Siberia only moss can grow; in the southern parts of Asia forests of valuable woods, plants of cinnamon and camphor, plantations of tea and coffee. Very little tea is produced outside of Asia. In Persia are large fields of roses, from which is made the celebrated "attar of roses."

b. *Mineral.* Here are found diamonds, rubies, sapphires, gold, silver, copper, iron, etc.

c. *Manufactured.* From Persia we get the finest shawls and carpets; from China and Japan silks, laces, satins, linens, carvings of wood, ivory and stone. Calico was first made in Calicut, India, from which it derived its name.

10. Races. Here are found the Caucasian, Mongolian and Malay races. Explain the differences clearly to the children.

11. Animals. Asia is the originial home of our most common domestic animals and fowls. Here also we find the rhinoceros, elephant, tiger, camel, yak, leopard, buffalo, monkey, ostrich, peacock, bird of Paradise, cobra-di-capello.

12. Cities. There are many large cities in Asia. They have usually narrow, crooked and dirty streets, while the stench is often sickening. They are usually enclosed with high walls. There are at least thirty cities in Asia where the population is over 100,000. How do they compare with home city? The most important ones are: Tokio, the capital of Japan, Pekin, the capital of China, Canton, the commercial city of China, where the streets are too narrow for carriages, Calcutta, Bombay, Shanghai.

13. Language Lessons. Continue the descriptions of pictures and journeys. Compare Asia with the United States in regard to all topics. In Asia our first parents were created; here was the garden of Eden; here nearly all the scenes of the Bible took place; here are the mountains of Horeb, Sinai, and Ararat; here are the ruins of Babylon, Nineveh and the Holy

Land, visited yearly by thousands from all over the world. Pearl fishing, bird of Paradise, peacock, elephant, rhinoceros, hyena, tea, coffee, camphor, rubies, diamonds, etc., are suitable topics for language lessons.

XV. — AFRICA.

Study first the relief map.

1. Hemispheres. Zones. Boundaries.

2. Extent. Africa is the second grand division in size.

3. Coast. The coast line is very regular, with few bays, harbors or navigable rivers.

a. *Oceans.* Atlantic, Indian.

b. *Seas.* Mediterranean, Red.

c. *Gulf.* Guinea.

d. *Channel and Straits.* Mozambique, Gibraltar (15 miles wide), Bab-el-Mandeb, "Gate of Tears." Why so called?

e. *Capes.* Bon, Guardafui, Verde, Agulhas, the most southern cape, Good Hope. Why so called?

f. *Islands.* Canary or Happy is the home of the Canary bird. St Helena was the prison of Napoleon Bonaparte. Who was he? Madagascar is twice as large as Great Britain.

4. Surface. The northern coast is mountainous and dry; the north central part is a vast desert; the southern part has high mountains, large lakes, deserts and fertile valleys.

a. *Mountain Ranges.* Atlas, Kong, Snow.

b. *Plains.* In the northern part is the desert of Sahara, 3000 miles long and 1000 miles wide. How does it compare in size with the United States?

5. Lakes. The largest are: Tchad, Albert, Nyassa, Victoria. Victoria is larger than Superior; and therefore it is the largest body of fresh water in the world.

6. Rivers. Nile, Congo, and Niger are the largest rivers. The Nile is noted for its annual overflow and lack of tributaries.

7. Climate. It is hot and dry in the north and south; hot and moist in the central part. Because of its situation in the Torrid Zone and because of the number of its deserts the heat is at times unbearable. In the desert of Sahara the temperature sometimes rises to 150 degrees in the daytime and falls below freezing at night. There are two seasons.

8. Productions. The most important are gold, ivory, diamonds, ostrich feathers, dates, gum-arabic.

9. Animals. Africa is noted for the number and variety of its wild animals. The most important are: giraffe, hippopotamus, zebra, gorilla, elephant, rhinoceros, lion, crocodile, ostrich.

10. Nations. Egypt is the most important one. It is one of the oldest nations in the world. Where is the Suez Canal? Why is it important?

11. Cities. The most important cities are: Cairo, one of the oldest in the world, Alexandria, the chief seaport, and Cape Town.

12. Language and Object Lessons. Continue the comparsons of one continent with another in regard to all topics. Have the children take imaginary journeys from home city to the different parts of Africa. For language lessons the following: The Nile, the Sahara, the animals, the inhabitants, ivory, etc.

XVI. — Oceania.

1. Position. It includes most of the islands of the Pacific. The largest is Australia, which is called a continent, being nearly as large as the United States, and belongs to Great Britain.

2. Divisions. Oceania is usually divided into three groups. a. Malaysia. This group is inhabited by the Malays, and includes the islands of Sumatra, Borneo, Java, Phillipine.

b. Australasia. c. Polynesia. This means many islands, and includes the rest of Oceania.

3. Productions. These are gold, wool, coffee, spices, date, cocoanut, camphor.

4. Animals. In Malaysia are found the same animals as in Asia; in Australia are found the kangaroo, wombat, lyre-bird. The birds and butterflies are the most beautiful in the world. Some of the butterflies measure more than twelve inches across the wings.

5. Cities. The largest is Melbourne. Sydney is second.

6. Language and Object Lessons. Continue comparisons and journeys as usual. Describe Australia, called "The Land of Inverted Orders." "We find here the most beautiful birds but they do not sing; birds without feathers, an animal with the bill of a duck and the body of an otter; flowers of exquisite colors, but with no fragrance, while the leaves of many trees are very fragrant; pears with the stem on the large end; cherries with the stone on the outside; trees that shed their bark instead of their leaves, and whose leaves give no shade; bees that do not sting; black swans and white eagles." Describe "The Valley of Death" in Java, the animals, the inhabitants.

Complete Geography.

At this stage the so-called Complete Geography is introduced. Before it is used I would call the attention of all teachers in the higher grades to the following:

1. See that the pupils have a clear understanding of the things taught as well as the words. Do not imagine that object lessons should be confined to the lower classes. Productions, pictures of animals, peoples, and characteristic scenes should be shown to all the classes.

2. Care should be taken that all places and objects men-

tioned should be accurately located. The rivers, mountains, and boundaries should be carefully traced throughout their entire length upon the map.

3. The children receive erroneous ideas in regard to the relative sizes of the countries, because the countries are drawn by different scales. Correct these errors by constant reference to one map where one uniform scale is used.

4. Do not allow the pupils to learn one fact after another without understanding the relations of these facts.

5. If a pupil makes a wrong statement, do not simply correct him, but, when possible by skillful questioning, lead him to see and correct his own error.

6. Pupils should be encouraged to read books of travel, relating to the continents studied. They should be questioned on what they read, and so taught to read more carefully.

7. Encourage the pupils to cut from papers any items of general or useful information, also to bring pictures that bear upon the work in hand.

8. During the study the attention of the pupils should be directed toward the following subjects:

1. Commerce, — the history and growth of commerce, important commercial countries, the advantages they possess that make them important, how commerce is carried on in the different countries, the important caravan routes, railroad routes, water routes, the leading articles of commerce, from what country exported, to what country imported. Take the large cities of all the countries, but particularly of the United States, and study them as indicated above.

2. Winds. What they are, how caused; the prevailing winds of the different countries, what they cause, how they help commerce, how hinder it; the prevailing trade winds,

hurricanes, whirlwinds, simooms, monsoons, why some winds are hot, some cold, some moist, some dry, land and sea breezes, zone of calms.

3. Climate. This embraces a study of latitude, elevation, trend of mountain-ranges, directions of the winds, the amount of rainfall, nearness to the sea, and nature of the soil.

4. Moisture. Fogs, clouds, rain, snow, hail, frost, avalanches, glaciers, icebergs; their cause, the location of regions that are rainless, that have periodical rains, the effect of moisture on soil, on climate.

5. Ocean. Its waves, tides, currents; their cause and value.

6. In the same way study the causes and uses of mountains, hills, valleys, plains, volcanoes, geysers, and hot springs.

7. Plants. These should be studied with a view to determine the laws that govern their distribution, confining some to narrow limits, extending others over the whole world.

8. Animals. These are also by nature limited to certain sections of the globe. Group the animals and plants into great natural regions, then study their habits and uses.

GRADE V.

To the Teacher: In studying the first part of the Geography, see to it that the definitions are not empty words to be forgotten in less time than it takes to learn them. On the other hand, when the pupils can associate the definition with the thing defined they should firmly fix the definitions in the memory.

Do not compel the child to learn about the motions of the earth until they have been carefully taught and illustrated. For this purpose use a lamp and a globe. In this way you can easily teach the meaning of the terms: day, night, noon,

midnight, sunrise, sunset, and twilight. In the same way by moving the globe around the lamp, the change of seasons can be shown. Also illustrate how the change of seasons, zones, and the difference in the length of the days and nights all depend upon the inclination of the earth's axis.

Before the pupils study about circles and latitude and longitude, show the need of such lines. A knitting needle and a ball will be all that is required.

1. Show the difficulty in locating places upon this ball.

2. Call attention to the two poles, the only fixed places on the ball.

3. Let them see that to help us measure the distance from the poles, we could draw a line around the ball, equally distant from the poles. We should call this an equator or equal divider.

4. The children should see that to enable us to tell more accurately the distance of any spot from our equator, we need other lines parallel to the equator. Draw them and call them parallels.

5. Lead the children now to see that we can give the distance of any spot from the equator, but not its position east or west. We must, therefore, have some fixed line from which to reckon distance east and west. Tell them that the English choose a line passing through a great observatory at Greenwich; the French choose one passing through Paris; and we choose one passing through our capitol at Washington. The one most commonly used is the one at Greenwich. This line running from pole to pole is called a meridian, the line of mid-day, because all the places on this line have mid-day at the same time.

6. Next show the need of other meridian lines to aid in locating places.

7. Explain to the children that the Romans supposed the

earth to be flat and longer from east to west than from north to south and hence called that measurement long-itude. The other measurement was therefore the breadth and called lat-itude.

8. Show that every circle is divided into 360°. The number 360 was chosen because it has so many exact divisors.

9. Let the children discover that latitude, being only distance from the equator to the pole, can only be counted by a quarter-circle or 90° and that longitude can be counted by a half-circle or 180°.

10. Before leaving the subject give the pupils a great deal of practice in finding places by giving to them the latitude and longitude.

I. — WESTERN HEMISPHERE or *New World.*

1. It contains North and South America, part of Asia, and many islands. It contains more water than land. Most of the land is north of the equator. The hottest part is South America and Mexico.

2. Coast. a. *Oceans.* Arctic, Antartic, Atlantic, Pacific.

b. *Ocean Currents.* Gulf Stream, Japan Stream or Kuro Siwo.

c. *Seas.* Bering, Caribbean.

d. *Gulfs.* Mexico, St. Lawrence.

e. *Bays.* Baffin, Hudson.

f. *Straits.* Bering, Davis, Hudson, Florida, Magellan.

g. *Islands.* Greenland, Iceland, West Indies. Why so called?

3. Surface. Mountain Systems. Rocky, Andes. These two ranges are really one, and therefore the longest in the world.

4. Rivers. Mackenzie, Yukon, St. Lawrence, Mississippi, Amazon. The Mississippi with the Missouri forms the long-

est river in the world; the Amazon is the largest river in the world.

5. Isthmus. Panama.

6. Language Lessons. The use of punctuation and capital letters can be taught by preparing sentences for dictation and by criticising the work.

II. — EASTERN HEMISPHERE or *Old World.*

1. It contains Europe, Asia, Africa, Australia and many islands. The largest of these islands are Nova Zembla, British Isles, Japan Islands, Madagascar, Guinea, East Indies. This hemisphere contains more land than water.

2. Coast. a. *Oceans.* Locate the five. Which is the largest? Which is the most important? Why?

b. *Seas.* Mediterranean, Arabian, China, Japan, Okhotsk, Red, Baltic, Caspian.

c. *Gulfs.* Guinea, Persian.

d. *Bay.* Bengal.

e. *Channel.* Mozambique.

f. *Isthmus.* Suez.

3. Surface. Mountain Systems. Alps, Himalaya, Atlas, Kong.

4. Rivers. Danube, Volga, Nile, Congo, Yang-tse-Kiang, Hoang-Ho or Yellow, Yenesei, Niger, Darling, Lena.

5. Language Lessons. Continue imaginary journeys or actual journeys in books of travel. Any geographical fact is as good for dictation for the purpose of teaching sentence writing as any thing that can be found. A large part of the geography can be easily reviewed in this way.

III. — COMPARISONS OF HEMISPHERES AND CONTINENTS.

Let the pupils observe that the land in the New World extends from northwest to southeast, and is long and narrow;

in the Old World nearly all the land is crowded together north of the equator and extends from northeast to southwest.

Have them compare the slope and trend of the mountain systems, and from this comparison develop the facts concerning climate, soil, productions, etc.

Have them study the forms of the continents until a correct picture is formed in their memory.

Let them arrange the grand divisions in pairs, and point out in which pair they look most alike, in which least alike. Let them also learn which is largest, which is smallest, and how they compare with one another in size. Let them learn the direction of the grand divisions one from another; how they are connected or how separated.

This work should be indefinitely extended as it is the most practical work in geography. So many of our pupils remain in school but a few years that it is more important for them to have a correct knowledge of the continents as a whole, around which to gather items of information that they may meet in after life, than to memorize a large number of disconnected facts that in all probability will be of little or no value to them.

IV. — NORTH AMERICA.

Mould the continent. Study its structure. (See Grade III.)

1. Boundaries. Commence progressive map-drawing.

2. Extent. It extends from the Arctic Ocean nearly to the equator, or about 5,000 miles. It is about 3,000 miles wide. About seven-eighths of it is situated in the North Temperate Zone; the remainder partly in the North Frigid and partly in the Torrid. Of the six grand divisions North America is third in size. In shape it is nearly a triangle.

3. Coast. The northern and eastern coastlines are very

irregular, being indented by many gulfs and bays, furnishing some of the finest harbors in the world. The coast line measures 30,000 miles.

a. *Oceans.* Arctic, Atlantic, Pacific.

b. *Seas.* Bering, Caribbean.

c. *Gulfs.* Mexico, California, St. Lawrence.

d. *Bays.* Baffin, Hudson, Honduras.

e. *Channels.* Yucatan.

f. *Straits.* Davis, Hudson, Belle Isle, Florida, Bering.

g. *Capes.* Barrow, Chidley, Farewell, Race, Sable, Cod, Hatteras, San Lucas, Mendocino, Prince of Wales.

h. *Islands.* (Cuba, Hayti, Jamaica, Porto Rica, Bahamas) or West Indies, Newfoundland, Greenland, Iceland, Cape Breton, Bermuda, Vancouver, Queen Charlotte, Arctic Archipelago.

Many of these islands are large and productive, especially those of the West Indies; while the numerous ones of the Arctic Archipelago are little known because of the cold. Greenland is probably the largest island in the world.

i. *Peninsulas.* Alaska, Labrador, Florida, Yucatan, Lower California.

j. *Isthmus.* Panama, Tehuantepec.

4. Surface. No. America is naturally divided into four parts: The Atlantic Plain, the Eastern Highlands, the Great Central Plain, the Western Highlands.

a. *Mountain Ranges.* In the eastern part is the Appalachian system, comprising many ranges, the most important of which are Alleghany, Blue, Cumberland. From 200 to 700 miles from the Pacific are the Rocky Mountains, south of Colorado called Sierra Madre. West of the Rocky Mountains are the Cascade, Sierra Nevada, and Coast.

b. *Peaks.* The most important are: St. Elias, Cascade Range, 19,500 feet, highest in North America; Brown, Rocky

Range, 16,000 feet, highest in Rocky; Mitchell, Appalachian, 6,700 feet, highest east of the Mississippi; Popocatepetl, Hooker, Fairweather, Hecla, Cook and Crillon.

5. Lakes. North America is noted for its great lakes, which contain nearly three-fourths of all the fresh water on the globe. A straight line from the mouth of the Mackenzie river to the Chesapeake bay would pass through nearly every large lake in North America. The great lakes in Canada are noted for their transparency; those of the eastern part of the United States for their commercial facilities; those in the western part for their saltness. Lake Superior is the largest or next to the largest body of fresh water on the globe. Great Salt Lake is one of the largest salt lakes on the globe. The largest lakes are: Superior, Huron, Michigan, Erie, Ontario, Winnipeg, Athabasca, Great Bear, Great Slave, Great Salt, Nicaragua.

6. Rivers. There are four great drainage slopes: The Arctic, the Atlantic, the Pacific, the Gulf. The Mississippi river basin is next to the largest river basin in the world. What is a river basin? The Mississippi and Missouri form the longest river in the world. The Yukon, first in volume of water in North America, is remarkable for its rapids and islands. In some places it is five miles wide. The Columbia and Colorado flow in some places through deep cañons. What is a cañon? Locate and tell to which river system they belong: Mackenzie, Yukon, Nelson, St. Lawrence, Hudson, Mississippi, Missouri, Ohio, Arkansas, Rio Grande, Colorado, Columbia.

7. Soil. Except in the far north and the Great Western Highland, the soil is very fertile.

8. Climate. The northern part is very cold; the central part has a variable climate, usually having hot summers and cold winters; the southern portion has a tropical climate.

What effects have the ocean currents upon the climate of Labrador and the North Pacific coast?

9. Productions. a. *Agricultural.* These are wheat, corn, rye, oats, barley, rice, cotton, tobacco, sugar-cane and the different fruits of the Temperate and Torrid Zones.

Maize, potatoes and tobacco were made known to the world by the discovery of America.

b. *Mineral.* Minerals of nearly every kind are found in abundance. The principal ones are gold, silver, iron, coal, lead, zinc, copper, petroleum, marble, etc.

c. *Manufactured.* These are of many varieties. The United States takes the lead of all states in North America in manufacturing. In what part of North America are the different productions found?

10. Natural Advantages. Excellent soil, good climate and facilities for markets are America's advantages for agriculture. Its numerous bays, length of sea coast (more than any other country), navigable rivers and lakes afford commercial advantages not excelled by any other continent.

Abundance of minerals and raw products, good shipping and water-power are the advantages for manufactures.

11. Animals. Nearly all the domestic animals were brought here by the European settlers. Among the native animals are the musk-ox, white bear, silver fox, whale, seal, and walrus of the polar regions. Bear, wolf, panther, bison and deer are found in the temperate parts. Monkeys, alligators, poisonous serpents, and birds of beautiful plumage in the tropical parts. Cod, herring, salmon, and shad are abundant in all waters. Turkeys were found here when America was discovered and two of them taken to Europe by the discoverers as curiosities.

12. Political Divisions. Name and locate the six divisions.

13. Inhabitants. a. *Race.* Most of the inhabitants are

descendants of Europeans. The Indians who occupied this country when discovered are rapidly decreasing. Most of them live in Mexico and Central America.

The Negroes are descendants of slaves brought here from Africa. The northern part is inhabited by Esquimaux of the Turanic race. There are also many thousands of emigrants from all the different parts of Europe and Asia.

b. *Occupation.* More than one-half of the people are engaged in agriculture. Commerce, manufacturing, and mining are also carried on.

14. Cities. Locate: New York, Philadelphia, Brooklyn, Boston, San Francisco, Chicago, Montreal, Mexico, Havana, New Orleans.

15. History. Iceland was discovered in the 9th century and settled by Irish and Norwegian colonies. Some people from Iceland sailed along the coast of North America as early as 1000, but the real discovery of America dates from 1492, when Columbus discovered the West Indies. A few years later the Cabots explored the coast as far as Florida. The French took possession of Canada and made settlements there. French Jesuits explored the Mississippi Valley. English settled the Atlantic coast commencing at Jamestown. The Spaniards made their settlements all around the Gulf of Mexico and on the Pacific coast.

16. Language and Object Lessons. Continue descriptions of journeys and pictures. The different animals and birds should be described in object lessons; also glaciers, geysers, volcanoes, and the regions around the north pole. For language work assign different topics to different pupils: Surface, — including mountains, lakes and rivers; climate, — where cold, hot, dry, temperate, moist; people, — different races, their dress, language and mode of living; products, — different trees, plants, animals, and minerals of the different zones, etc.

V. — UNITED STATES.

1. Position. Boundaries. Progressive map.

2. Extent. It is nearly twice as long from east to west as north to south and in size nearly as large as Europe.

3. Coast. On the Atlantic and Gulf the coast is usually low, containing many fine harbors. The coast of the Pacific is bold and rocky, containing few harbors. The Atlantic coast contains three distinct inward curves; the first from the eastern coast of Maine to Cape Cod; the second from Cape Cod to Hatteras; the third from Cape Hatteras to the southern point of Florida. The Pacific coast is one outward curve.

a. *Oceans.* Atlantic, Pacific.

b. *Gulf.* Mexico.

c. *Bays.* Chesapeake, San Francisco, San Diego, Green.

d. *Straits.* Florida, Juan de Fuca (100 miles long by 20 wide), Mackinac, Bering.

e. *Sounds.* Long Island, Albemarle, Pamlico, Puget.

f. *Capes.* Cod, Hatteras, Sable, Mendocino, Flattery, Prince of Wales.

g. *Islands.* Long, Bahamas, Aleutian, about 150 in number, containing many mountains or volcanoes.

h. *Peninsulas.* Cape Cod, Florida, Alaska, Upper and Lower Michigan.

4. Surface. See Topic IV. Section 4.

a. *Mountain Ranges.* The Appalachian System consists for the most part of low, forest covered mountains, while the Rocky and Cascade Mountains are oftentimes covered with clouds and snow.

b. *Mountain Peaks.* St. Elias, 19,500 feet, in Alaska is the highest in the United States. Whitney, 14,800 feet, is the highest in the United States not including those of Alaska.

Other important peaks are Shasta, Pike's, Long's, Hood, Sierra Blanca, Harvard, Torrey's.

c. *Valleys.* Nearly all the river valleys in the United States are very fertile, while the Valley of the Mississippi is one of the most fertile in the world.

d. *Plateaus.* The region enclosed by the Rocky and Sierra Nevada mountains is a barren track of land. Why?

e. *Natural Curiosities.* The United States abound in natural wonders. The Mammoth Cave, Niagara Falls, Natural Bridge, Garden of the Gods, Yosemite Valley are named among the wonders of the world. These should be described for language work.

5. Lakes. The United States contains more and larger lakes than any other country. The largest are: Superior, Michigan, Huron, Erie, Ontario, Great Salt, Champlain, St. Clair, Lake of the Woods.

6. Rivers. The rivers of the United States contain about 50,000 miles of navigable waters; more than is found in any other country. The largest and most important are: Mississippi and Missouri (4200 miles long, the longest in the world), Arkansas, Red, Ohio, Hudson, Potomac, Savannah, Colorado, Rio Grande, Sacramento, Columbia, Yukon. The Potomac river is navigable for 110 miles; the Missouri for 2600 miles. All the other rivers mentioned are navigable for distances varying between these limits. Of what advantage to the United States are its numerous navigable rivers?

7. Soil. See Section 4, c. and d.

8. Climate. It is greatly varied. In the north, the cold in winter is extreme, lasting five months. The coldest place is said to be in the northern part of Dakota. The climate of the southern part is unhealthy in the summer. It is much warmer on the Pacific than the Atlantic coast. The Pacific coast of Alaska has a warmer climate than the coast of

Maine. This warmer climate on the Pacific is caused by the warm ocean current which bathes the coast. Generally the climate of the United States is as healthy as that of any other part of the world.

9. Productions. a. *Agricultural.* These are hay, corn, rye, and oats for the north-eastern part; wheat, oats, corn and potatoes for the Central States; cotton, corn, rice, sugar, tobacco, hemp, oranges and lemons for the Southern States; wheat, fruit and cattle for the Western States.

b. *Mineral.* Gold and silver are found in nearly all the western states and territories. Iron is very common; coal is found in greater quantities than in any other country. The other minerals are lead, copper, petroleum, quicksilver, etc.

c. *Manufactured.* New York ranks first and Pennsylvania second as manufacturing states. The leading articles of manufacture are cotton and woolen goods, boots and shoes, agricultural implements and liquors.

10. Commerce. The value of our commerce is, next to Great Britain, the most extensive in the world. There are ninety-three seaports in the United States. The most important are: New York, Boston, New Orleans, San Francisco, Philadelphia, Baltimore. Locate these places and name the exports from each. The exports of the United States are chiefly food stuffs, cotton and petroleum to Europe. The imports from Europe are sugar and dress goods; from South America coffee and hides; from Asia tea, silks and rice. A large amount of domestic commerce is carried on by means of our numerous lakes, rivers, canals and railroads.

11. Natural Advantages. See Topic IV., Section 10.

12. Animals. See Topic IV., Section 11.

13. Inhabitants. a. *Race.* See Topic IV., Section 13, a.

b. *Number.* At the last census in 1880 over 50,000,000.

c. *Occupation.* See Topic IV., Section 13, b.

d. *Language.* English is the prevailing language, but in different parts the German, French, and Spanish languages are used.

e. *Government.* It is a Republic of forty-two states, seven territories, and one district. Each state is independent in its local affairs and its government is patterned after that of the United States. The Constitution is the highest law in the land. It divides the government into three departments: Legislative, Executive and Judicial. The people of the different states elect men to make their laws. These men meet in Washington in two rooms at the capitol. Those in one room are called Representatives; those in the other Senators; together they are called Congress. This is the Legislative Department.

The states also elect a man who is to see that the laws are obeyed. He is called the president, and is elected for four years. He is at the head of the Executive Department.

There are also judges who explain the law. They form the Judicial Department.

f. *Education.* Education is encouraged in all the States; in some it is made compulsory.

g. *Religion.* There is no established church as in some countries, but every one has a right to his own religious belief.

14. Cities. New York, Philadelphia, Brooklyn, Chicago, Boston, St. Louis, Baltimore, Cincinnati, San Francisco, New Orleans, Cleveland, Pittsburg, Buffalo, Washington, Newark, Louisville, Jersey City, Detroit, Milwaukee, Providence. These are arranged in order according to the population by the census of 1880. Probably the census of 1890 will change the order.

15. History. In 1598, Cabot, who was sent out by the English, discovered Virginia. Soon the whole Atlantic Coast

was explored, and various attempts were made at settlements, but none were successful until Jamestown, Va., was settled in 1607 by the English; New York by the Dutch in 1614, and Massachusetts by the Puritans in 1620. Soon thirteen states were settled. These were as follows: New Hampshire, Massachusetts, Rhode Island, Connecticut, New York, New Jersey, Pennsylvania, Delaware, Maryland, Virginia, North Carolina, South Carolina, and Georgia. After a desperate war known as the Revolution, these states won their independence from England. Since then the United States have grown in number, wealth and power.

16. Language and Object Lessons. For reproduction continue descriptions of journeys, pictures and accounts of the early settlers. Give object lessons on the productions. Make as complete a collection as possible of all the productions of the United States. Compare our country with all parts of the world.

VI. — DANISH AMERICA.

1. Position. It is in the north-eastern part of North America and is composed of two islands, Greenland and Iceland, belonging to Denmark.

2. Coast. The eastern coast of Greenland is almost inaccessible on account of the drifting ice-packs; the western coast is rocky and high. The coast of Iceland is very irregular.

a. *Ocean.* Atlantic.

b. *Bay.* Baffin.

c. *Straits.* Davis, Denmark.

d. *Capes.* Washington, Farewell.

3. Surface. The surface is high and rocky. The higher portions are covered with perpetual snow, forming glaciers and icebergs.

a. *Volcanoes.* There are 30 volcanoes in Iceland. Hecla and Skaptar are the most noted.

b. *Natural Curiosities.* Within a circuit of two miles there are more than 100 hot springs and geysers. The Great Geyser is the most noted one. Nowhere in the world is the Aurora Borealis seen in such splendor as here.

4. Soil. The soil is barren because of the cold.

5. Climate. The climate of Greenland is severe. Snow falls during every month in the year; yet there are proofs that the climate was once tropical. Here, during the winter, the people do not see the sun for several months, and in the summer the sun never sets. The climate of Iceland is so much warmer than that of Greenland that the people can keep ponies, cattle and sheep.

6. Productions. Mosses and lichens grow in the north and furnish food for the reindeer, musk-ox and bear. In the south of Greenland the pine and birch grow to be five feet high. There is but little timber in Iceland, so the people depend upon the driftwood. Oats and garden vegetables grow in Iceland.

7. Animals. The wild animals are the white bear, whale, walrus, reindeer and fox. Sea-fowls and fish are abundant.

8. Inhabitants. The people of Iceland are of Scandinavian descent and are famous for their hospitality and learning. The people of Greenland are mainly Esquimaux. They are short in stature, live on seal-blubber, and in winter live in houses of snow.

9. Cities. Reikjavik, signifies "steam-town," so called from the geysers near it. It is the capital of Iceland. Upernavik is the most northern town in the world, situated on the north-western coast of Greenland.

10. History. Iceland was discovered about 960 by a Norwegian pirate. The Icelanders were hardy and brave

sailors. They discovered Greenland; and about 1000 they discovered New England, or Vineland, as they called it.

11. Language. Assign Danish America as a subject for composition. Contrast the Esquimaux with the inhabitants of the United States. Describe the geysers and volcanoes.

VII. — BRITISH AMERICA.

1. Position. Boundaries. Names of the different Provinces.

2. Coast. The coast is irregular, containing many fine harbors. The coast of Labrador is uninviting. The northern coast is little known.

a. *Oceans.* Arctic, Atlantic, Pacific.

b. *Gulf.* St. Lawrence.

c. *Bays.* Hudson, James, Baffin, Georgian, Fundy. The Cumberland Basin in the Bay of Fundy is noted for its high tides, which rise sometimes over sixty feet, and rush with such velocity that swine are overtaken and drowned while feeding on shellfish.

d. *Channels, Straits.* Belle Isle, Northumberland, Georgia, Davis, Hudson, Juan de Fuca.

e. *Sounds.* Queen Charlotte, Melville.

f. *Capes.* Chidley, Race, Sable.

g. *Islands.* Newfoundland, Prince Edward, Anticosti, Cape Breton, Southampton, Queen Charlotte, Vancouver, Thousand, Arctic Archipelago. The last named consists of a large number of rocky, ice-bound islands. Queen Charlotte and Vancouver are noted for their mild climate and abundance of minerals, particularly coal.

h. *Peninsulas.* Nova Scotia, Melville, Labrador.

i. *Great Bank.* This is the most profitable fishing ground in the world, and gives employment to about 50,000 people.

3. Surface. It is quite similar to that of the United States.

See surface of North America. Newfoundland is rocky and has a lake on the summit of nearly every hill.

a. *Mountain Ranges.* Besides the Rocky and Coast Ranges there are no very important ones.

b. *Peaks.* Brown, Hooker, Murchison, Lyell.

c. *Natural Curiosities.* All the scenery is romantic and picturesque. All the rivers abound in beautiful falls, the most noted are those of Montmorenci. It is now claimed that the most wonderful cataract in the world has just been discovered in the interior of Labrador. The falls are on the Grand River and are estimated to be at least 2000 feet in height.

4. Lakes. The lakes of Canada are very numerous. The same lake is sometimes the source of different rivers, so that it is possible to pass from one river system to another by water, as from the Hudson bay into the Great Lakes. The lakes are noted for their transparency. In Great Bear Lake an object can be seen to the depth of 90 feet. The following lakes are important: Winnipeg, Great Bear, Great Slave, Athabasca.

5. Rivers. There are many rivers here, navigable in the summer, but frozen over in the winter. During this season iceboats are used. The important rivers are: St. Lawrence, Mackenzie, Athabasca, Peace, Nelson, Saskatchewan.

6. Soil. The northern part is unproductive, but the southern part is similar to the northern part of the United States. Large parts of Quebec, Labrador, and Newfoundland are almost barren.

7. Climate. The climate is much like that of Danish America; noted for its severity. The summers are short and hot. The western part is much warmer than the eastern.

8. Productions. a. *Agricultural.* Fruits and nuts of the

temperate climate are found. Corn will not ripen except in the southern part. Manitoba is noted for its wheat. Hay is a leading product.

b. *Mineral.* Nova Scotia, New Brunswick and Ontario are rich in minerals, as iron, lead, tin, copper, and coal. Here is also quarried the stone from which grindstones are made.

c. *Manufactured.* Nearly all the manufactured goods are imported from Europe or the United States.

9. Improvements. Suspension Bridge is one of the noted bridges in the world. The Welland canal permits boats to pass around the Niagara Falls.

10. Animals. The wild animals comprise the bison, bear, moose, wolf, beaver, otter, ermine, mink and marten. Most of these are hunted for their skins, so that furs form an important product. Fish are abundant in all the waters.

11. Inhabitants. a. *Race.* The people are mainly of English descent. Those of the south eastern provinces are descended from the early French settlers. Many of the inhabitants of the territories are Indians and half-breeds.

b. *Occupation.* Agriculture, hunting, fishing and lumbering are the chief occupations.

12. Government. The government is in many respects similar to that of the United States. The chief executive is called Governor-General, and is appointed by the Crown of England. Though belonging to England, Canada enjoys Home Rule.

13. Cities. Ottawa, Ontario, is the capital of the Dominion of Canada, and contains magnificent public buildings. Montreal is the largest city in Canada. It is built upon an island in the St. Lawrence river. It contains the cathedral of Notre Dame, the largest church-building in America, having a capacity of from 12,000 to 15,000 persons. Its bell weighs

a ton and a half. Toronto is the capital of Ontario, and has a beautiful situation. It is the largest lake-port in Canada. Quebec, the capital of Quebec, has a picturesque situation on the St. Lawrence, and is called the Gibraltar of America because of its strong fortresses. Halifax, the capital of Nova Scotia, is situated on one of the finest harbors in the world. St. John is the chief city of New Brunswick. St. Johns, the capital of Newfoundland, and the most easterly city in North America south of Greenland, is an important fishing station. Frederickton is the capital of New Brunswick. Charlottetown is the capital of Prince Edward Island. Hamilton, on Lake Ontario is an important lake-port. London is an agricultural region, and is much visited by invalids on account of its white sulphur springs. Winnipeg is the capital of Manitoba, and is called the "Gate of the North-west." Victoria is the capital and chief seaport of British Columbia. Vancouver is the western terminus of the Canadian Pacific Railway.

14. Language Lessons. Fascinating stories should be read to the pupils for reproduction about the life in the polar regions. Read about the animals, the glaciers, the icebergs, the attempts to find the north pole, running the rapids of the St. Lawrence. Have the pupils gather pictures and newspaper clippings about the polar regions, which should be duly mounted and preserved. Read about the capture of Quebec during the French and Indian War.

VIII. — MEXICO.

1. Position. It is south of the United States.

2. Extent. It is about one-fourth the size of the United States.

3. Coast. The Gulf coast contains few harbors, and these are obstructed by sandbars. Violent tempests render both coasts unsafe for several months every year.

a. *Ocean.* Pacific.

b. *Sea.* Caribbean.

c. *Gulfs.* Mexico, California, Tehuantepec. The Gulf of California is 700 miles long, and contains valuable pearl fisheries.

d. *Bay.* Campeche.

e. *Channel.* Yucatan.

f. *Capes.* Catoche, Corrientes, San Lucas.

g. *Islands.* The islands are small and insignificant.

h. *Peninsulas.* Lower California, Yucatan.

4. Surface. It is a high plateau and table-land, crossed by several ranges of snow-capped mountains. The eastern coast is low.

a. *Mountain Ranges.* Several ranges cross Mexico, but the chief range is the Sierra Madre, "Mother Range." The mountains around the City of Mexico are called Cordilleras.

b. *Peaks.* There are many volcanoes and some are of great height. Popocatepetl, "the hill that smokes," is next to the highest mountain in North America. Iztaccihuatl, "the white lady," resembles a woman with a white cloth spread over her, and the Mexicans have a superstition that she is the wife of Montezuma, the sovereign of Mexico at the time of its conquest by Cortez. Locate also Orizaba.

c. *Natural Curiosities.* Mexico is covered with relics of a former great nation. There are many ruins and pyramids. All the scenery is grand. Near the City of Mexico is the echoing cave, where a man's voice echoes and re-echoes almost like thunder.

5. Lakes. The lakes are numerous but small. Tezcoco is one of the largest, and contains the islands on which the old city of Mexico was built. Here were the celebrated floating gardens formed by covering rafts with a layer of rich earth and allowing them to float from place to place.

6. Rivers. The rivers are short and not navigable beyond the tide-water line. Rio Grande, Santiago and Balsas are the largest.

7. Soil. The low plains are fertile and covered with a luxuriant vegetation. Most of the central table-land is dry and barren.

8. Climate. The climate is hot and unhealthy along the coast, but mild and healthful in the interior. In going from Vera Cruz to the City of Mexico, only a few hours' ride, you will pass through every degree of climate and find the productions peculiar to every zone. There are two seasons, the rainy and the dry. The rainy season lasts four months, commencing at the end of May. The rain falls usually in the afternoon, and oftentimes without any warning.

9. Productions. a. *Agricultural.* Mexico, owing to the different elevations, has every variety of climate and productions. Here we find the tropical fruits, as yams, oranges, melons, bananas, figs, etc. Here is the maguey, a plant which yields an abundance of juice, which is made into a kind of fermented drink, called pulque. The latter is distilled into intoxicating liquor, which is a favorite drink among the people. One plant produces a hundred bottles of pulque. From the root of the same plant is made sugar, and from the fibers, hemp. There are here also about forty species of cacti, on which a little red insect feeds. The dried bodies of these insects furnish the cochineal of commerce, from which a beautiful red dye is made. The cacao tree produces a bean from which cocoa and chocolate are prepared. Vanilla is the seed or bean of a climbing plant, and is valuable for the flavoring extract made from it. The forests yield many valuable woods, as mahogany, Brazil-wood, ebony, logwood, and different dyewoods. One tree of mahogany is sometimes sold for $10,000.

b. *Mineral.* In the mountainous districts are the richest silver mines in the world. Here also are found gold, tin, quicksilver and marble.

c. *Manufactured.* The manufactures consist chiefly of sugar and liquors.

10. Commerce. All of the productions are exported and nearly all the commerce is with Great Britain.

11. Animals. The wild animals are the deer, bears, porcupines, sloths, gluttons, ant-eaters, armadillos and monkeys. Here are also enormous lizards, tarantulas, centipedes and snakes.

12. Improvements. There are but few public roads, and until recently no railroads. Much of the merchandise is carried on the backs of mules.

13. Inhabitants. a. *Race.* The inhabitants are mostly of Spanish and Indian origin. Spanish is the language of the country. The coast lowlands of Mexico are almost uninhabitable because of the unhealthy climate; therefore nine-tenths of the people live in the Tierra Templada or table-lands.

b. *Occupations.* Mining and agriculture are the chief occupations.

14. Government. Mexico consists of twenty-seven states, one territory, and a federal district. The government is modeled after that of the United States; but Mexico is not as prosperous, because the government has not been so well administered.

15. Cities. Mexico, the capital and largest city, is situated in a beautiful valley, surrounded by snow-capped mountains and volcanoes. Vera Cruz, the "city of the true cross," is situated in an unhealthy region, but is quite prosperous because it is the chief port on the Gulf. Puebla, called "the city of angels," because of its beautiful situation, is noted for

its numerous and elegant churches. Guadalajara is next to the largest city. Acapulco is the principal port on the Pacific coast.

16. Language and Object Lessons. Read "Montezuma" or "The Life of Cortez" for an account of the old city of Mexico and its capture. These books will furnish delightful stories for reproduction. Describe the capture of Monterey and Mexico during the Mexican War. Compare Mexico with the United States and British America. Describe the adobe houses and the Mexican manner of life. Continue to gather pictures and newspaper items, and compare them with those gathered in reference to the polar regions. Give the usual object lessons on the animals and productions.

IX. — CENTRAL AMERICA.

1. Position. Boundaries.
2. Coast. Similar to that of Mexico.
a. *Ocean.* Pacific.
b. *Sea.* Caribbean.
c. *Bay.* Honduras.
d. *Capes.* Gracias á Dios.
e. *Isthmus.* Tehuantepec, Panama.

3. Surface. Similar to Mexico. The Sierra Madre range continues through Central America and appears in South America as the Andes. The highest peaks are Agua, "water-volcano," and Fuego, "fire-volcano." It is said that about eighty earthquakes occur each year, in some of which cities have been buried in ruins, and whole tribes of people destroyed. There are more than twenty active volcanoes on the Pacific coast.

4. Lakes. Lake Nicaragua is the largest lake in North America, south of the United States. The lake is deep, and one of the proposed routes for an inter-oceanic canal is from

this lake to the Pacific, a distance of only 18 miles. Around the lake are many interesting relics of antiquity.

5. Rivers. There are only a few small ones.

6. Soil, Climate, Productions, Animals, and Inhabitants. In regard to all these topics Central America is similar to Mexico.

7. Government. Central America consists of five independent republics and the colony of Balize or British Honduras. Great Britain and the United States bind themselves by treaty "not to occupy or colonize any part of Central America." Balize, by special stipulation, is left for British occupancy for the cutting of mahogany and logwood. It is understood, also, that the United States is to have control of all isthmus transit routes, whether railways or ship-canals.

8. Cities. New Guatemala is the capital of Guatemala and is situated near the site of the old city, which was destroyed by an earthquake in which 40,000 inhabitants perished. The houses now have only one story, and walls three feet thick. Tegucigalpa is the capital of Honduras, and in its vicinity are rich mines of gold, silver and copper. San Salvador, the capital of Salvador, is situated in the midst of indigo and tobacco plantations. Managua is the capital of Nicaragua and built on the slope of an active volcano. San José is the capital of Costa Rica. Balize is the capital of Balize.

9. Language Lessons. Continue comparisons, descriptions of pictures and products. Read accounts of destructive earthquakes, the gathering and preparing of India-rubber, etc.

X. — West Indies.

1. Position. They consist of a vast archipelago extending from the Gulf of Mexico through the Caribbean Sea and Atlantic Ocean. Some of them are of coral formation, the rest

are the crest of a partly submerged mountain-range. They are divided into three groups: 1, the Bahamas, south-east of Florida; 2, The Greater Antilles, including the four large islands of Cuba, Hayti, Jamaica, and Porto Rico; 3, The Lesser Antilles, extending southeast from Porto Rico to the mouth of the Orinoco.

2. Coast. All except the coral islands contain excellent harbors.

a. *Ocean.* Atlantic.

b. *Sea.* Caribbean.

c. *Gulf.* Mexico.

d. *Channels and Straits.* Yucatan, Florida, Windward Passage, Mona Passage.

3. Surface. The center of Cuba, Hayti, and Jamaica is mountainous. Of the 600 Bahamas only 17 are inhabited. The remainder are so low that occasionally the waves of the sea sweep over them. All of the Lesser Antilles are rugged and most of them are volcanic.

a. *Natural Curiosities.* Pitch Lake on the island of Trinidad is remarkable. It is one and one-half miles in circumference and of unknown depth. On the sides the pitch is hard and cold, but the center is in a liquid state, yielding asphaltum or mineral tar. The hardened asphaltum is used in paving the streets of Paris and other cities. There are also a number of mud-volcanoes on and near this island.

4. Lakes and Rivers. They are small mountain-torrents with wide mouths.

5. Soil. The soil is remarkably fertile.

6. Climate. The climate is usually hot and moist, though the heat is moderated by refreshing sea-breezes. There are two seasons, a wet and dry. In the summer the islands are visited by terrible storms, called hurricanes. These storms are generally preceded by a calm, which is followed by light-

ning, thunder, rain, hail and terrible blasts of wind. Everything is swept before them.

7. Productions. a. *Agricultural.* These consist of all kinds of tropical fruits, sugar-cane, coffee, cotton, tobacco and forests of valuable woods.

b. *Mineral.* Most of the islands are rich in all kinds of minerals. Cuba is noted for coal, Turks Island for salt, Jamaica for lead, Isle of Pines for beautiful colored marbles.

c. *Manufactured.* These are chiefly sugar, molasses, and cigars. The tobacco of Cuba is considered the finest in the world.

8. Commerce. The commerce is valuable and chiefly carried on with the United States, England and Spain. Besides the productions already mentioned, the exports include sponges, coral and green turtles.

9. Animals. Wild boars, monkeys, lizards and beautiful birds are abundant. Reptiles and insects are the pests of the islands. The ladies of Cuba use the lightning beetles as ornaments for their hair.

10. Inhabitants. a. *Race.* Most of the inhabitants are negroes; the remainder are Spaniards.

b. *Occupation.* The people are generally industrious. Raising tropical fruits, sugar-cane and tobacco is the leading industry. Sponge-fishing is also an important occupation.

11. Government. Hayti and San Domingo are independent republics. Cuba, Porto Rico and the Isle of Pines belong to Spain. The Bahamas, Jamaica and most of the Lesser Antilles belong to Great Britain. The remainder to France, Netherlands, Denmark, Norway and Sweden.

12. Cities. Havana is the capital and chief city of Cuba. It is one of the largest and richest cities in America; has one of the best harbors in the world; is the greatest sugar-market in the world; is the second city in the western hemisphere in

foreign commerce; its cathedral contains the remains of Columbus. Port au Prince is the capital of Hayti. Santo Domingo is the oldest town on the western continent, founded in 1494. Kingston is the capital of Jamaica. Puerto Principe is the largest town in the interior of Cuba, noted for its narrow and filthy streets. Santiago is an unhealthy place, but has a fine harbor. San Juan is the capital of Porto Rico. Matanzas is a commercial city of Cuba. Nassau on New Providence Island is the capital of the Bahama Islands.

13. History. The first land seen by Columbus on his first voyage was one of the Bahamas. Cat, Watlings and Samana lay claim to the honor. The last was probably the one. He also discovered Cuba on that voyage. The island was then very populous but nearly all the natives have since been absorbed by the Spaniards. Porto Rico was discovered by Columbus on his second voyage.

14. Language and Object Lessons. Contrast "Life and Nature under the Tropics" with "Life and Nature at the Poles." Compare the pictures of the different regions. Describe hurricanes and earthquakes and show pictures of the same. Give object lessons on the animals and productions.

XI. — THE NEW ENGLAND STATES.

1. Position. Progressive map. Boundaries of the group and individual states.

2. Coast. It is much indented with numerous bays, furnishing many miles of sea-coast.

a. *Ocean.* Atlantic.

b. *Bays.* Passamaquoddy, Penobscot, Casco, Massachusetts, Cape Cod, Buzzards, Narragansett.

c. *Sounds.* Long Island, Nantucket, Vineyard.

d. *Capes.* Elizabeth, Ann, Cod.

e. *Islands.* Mount Desert, Nantucket, Marthas Vineyard,

Rhode and Block are all noted summer resorts. The most celebrated is Rhode, which is called the "Eden of America." Newport is situated on this Island. Locate also Long Island.

f. *Peninsula.* Cape Cod.

3. Surface. It is generally rugged except in the extreme southeast. The western part is crossed by several ranges of the Appalachian system.

a. *Mountain Ranges.* There are several mountain ranges: the Green, Hoosac, and Taconic.

b. *Peaks.* Katahdin, Mansfield, Greylock, Wachusett and the White Mountains. The White Mountains consist of a group of barren peaks covered with snow most of the year. Most of them are named for presidents and other distinguished men. The highest is Washington, 6,288 ft. high, the highest peak in New England. The mountain and its vicinity is a celebrated summer resort. On the top of the mountain is a house, called the Tip-Top house. The wind blows so violently that it is necessary to chain the building to the ground.

c. *Valleys.* The Connecticut is the largest and most fertile in New England.

d. *Natural Curiosities.* Throughout all the New England states can be found scenery as picturesque as any in the world. Near Franconia is a peak called the Profile Mountain, 1,000 feet high. A side-view exhibits a gigantic profile of a human face. In Stockbridge is "The Ice-Hole," a narrow and deep ravine where the ice remains all the year. Through the Hoosac Mountains is a tunnel nearly five miles long.

4. Lakes. There are numerous lakes in New England. Maine alone has 1,700 lakes, each covering at least one square mile. Locate: Moosehead, Grand, Schoodic, Memphremagog, Winnipiseogee, Rangely, Champlain.

5. Rivers. There are many rivers in New England, most of which furnish valuable water-power. It is said that the Merrimac drives more mills and factories that any other river in the world. The Connecticut is the longest. Locate: St. Croix, St. John, Penobscot, Kennebec, Androscoggin, Merrimac, Connecticut, Blackstone, Thames, Housatonic.

6. Soil. The soil in the river-valleys is fertile, but elsewhere it is more suitable for grazing than farming.

7. Climate. The winters are long and cold; the summers hot but very changeable.

8. Productions. a. *Agricultural.* These are limited almost wholly to dairy and garden produce. Most of the wheat, corn, and even potatoes are brought from the West. Horses, cattle, sheep, and hogs are raised in large numbers. The fruits are apples, pears, plums, strawberries, currants, and Cape-Cod cranberries.

b. *Mineral.* These are chiefly building-stones, as granite, marble, and limestone; though iron, copper, and zinc are found in some places.

c. *Manufactured.* The New England States excel in the amount and variety of the manufactures. They include almost every kind of goods in cloth, wood, leather and metal. More than one-half of the cotton and woolen goods made in the United States is made here. Name the most important manufactures.

9. Commerce. Extensive commerce, both domestic and foreign, is the result of the manufacturing. Boston is the leading port. The exports are grain, beef, pork, ice, granite, and manufactured goods. The imports are wool, hides, rags, tropical fruits, coal and flour.

10. Improvements. These consist chiefly of railroads which are being constantly built. The Cape Cod Ship Canal was commenced in 1881. It is eight miles long and connects

Buzzards Bay with Cape Cod Bay. The distance between Boston and New York will be shortened 100 miles.

11. Animals. In the wild and uninhabited parts are found many wild animals, such as bear, deer, fox, wolf, wild-cat and beaver.

12. Inhabitants. a. *Occupations.* The occupations are manufacturing, commerce, fishing, and quarrying.

b. *Education.* New England has always been noted for its good schools snd colleges. The most noted are: Harvard, Yale, Amherst, Brown, Williams, Dartmouth, Smith, Wellesley. Locate them.

13. State Characteristics. Maine, the Pine Tree State, is noted for its lakes, lumber, and good harbors. It ranks first in ship-building. It is the most eastern State of the United States.

New Hampshire, the Granite State, is noted for its beautiful scenery of lake and mountain, and for its granite quarries.

Vermont, the Green Mountain State, is noted for its butter, cheese and maple-sugar. It is the only one of this group that has no sea-coast.

Massachusetts, the Bay State, is the first in the union in sea-fisheries, and for its size first in railroads and manufactures. It ranks first in cotton, woolen and leather goods.

Rhode Island, Little Rhody, is the smallest State in the Union and most densely populated. Its most important manufactures are cotton and woolen goods.

Connecticut, the Nutmeg State or Land of Steady Habits, is noted for its manufacture of clocks, cutlery, rubber goods, hardware, and sewing-machines.

14. Cities. *Maine.* Augusta is the capital. Portland is the largest city and the winter terminus of the Quebec and Liverpool Steamship Co. Why? Bangor ranks next to Chicago as the largest lumber-market in the union. Locate also Lewiston and Auburn.

New Hampshire. Concord is the capital. Manchester is the largest city and noted for its cotton manufactures. Nashua, Dover and Portsmouth are important cities.

Vermont. Montpelier is the capital and Burlington the largest city. Rutland is noted for its marble-quarries, and, though it is not a city, it has a larger population than Burlington. There are only two cities in the State.

Massachusetts. Boston is the capital. It is also the largest city and commercial center of New England; it is the second city in the Union in foreign commerce; because of its educational institutions it is called the "Athens of America." Lowell, Lawrence and Fall River are all noted for their cotton manufactories. Lynn is noted for its manufacture of shoes. Worcester, sometimes called the "Heart of the Commonwealth," is the second city in size in Massachusetts. Springfield contains the United States arsenal. Holyoke is noted for its water-power. Paper is the chief manufacture. Salem is noted for its tanneries. New Bedford is a wealthy city formerly engaged in whale-fishing. Cambridge is the seat of Harvard University.

Rhode Island. Providence is one of the capitals and the second largest city in New England. It is noted for the variety of its manufactures and as the seat of Brown University.

Newport is one of the capitals and a favorite summer resort. Here is the Old Stone Mill. Read the description in any history.

Connecticut. Hartford is the capital, called the Charter Oak City. It is noted for the number of its insurance companies. New Haven is the largest city, chief sea-port, and the seat of Yale University. Waterbury has the largest brass-foundries in the Union. Here are made the celebrated Waterbury Watches. Meriden is noted for its Britannia, silver and tin plated ware. Locate Bridgeport and Norwich.

15. History. New England was first settled by the Puritans, who fled from England on account of religious persecution. They came over in the Mayflower, and landed at Plymouth, December 22d, 1620. The first settlement in Connecticut was made by emigrants from Massachusetts in 1636; and during the same year Roger Williams made a settlement in Rhode Island. Vermont was also settled by people from Massachusetts. Maine and New Hampshire were originally a part of Massachusetts. For the first few years the colonists suffered from hunger and cold; during this time fortunately the Indians were their friends. Later the colonists had two wars with the Indians, known as King Philip's and the Pequod. The first battles of the Revolution, Lexington and Bunker Hill, were fought in Massachusetts.

16. Language and Object Lessons. Read for reproduction Whittier's poem, "The Merrimac," or Longfellow's poem, "The Arsenal at Springfield," or brief accounts of New England's noted men. Read also descriptions of New England's natural curiosities, the scenery in the White Mountains, the Old Tower at Newport, the sufferings of the pilgrims, King Philip's War, the Salem witch-craft, the Boston Tea-Party, the Battle of Lexington, the Battle of Bunker Hill, the Bunker Hill monument, hunting in the woods of Maine. Continue journeys and comparisons. Give object lessons on productions and animals.

GRADE VI.

I. — The Middle Atlantic States.

1. Position. Boundaries of group and each State. Progressive map drawing.

2. Coast. It is low, sandy and level. The shores of New Jersey are covered with a fine white sand, which furnishes delightful drives and makes its beaches renowned as sea-bathing resorts.

a. *Ocean.* Atlantic.

b. *Bays.* New York, Delaware and Chesapeake. The Chesapeake bay is the largest oyster region in the United States.

c. *Channels and Sounds.* The Narrows, Long Island.

d. *Capes.* Sandy Hook, May, Henlopen.

e. *Islands.* Long Island is 120 miles long and 20 miles wide. Manhattan contains the city of New York. This island was purchased of the Indians for about $23. How much is it worth to-day? The Thousand Isles are at the head of the St. Lawrence river. There are about 1,500 of them. Many of them are owned by wealthy people who have built there elegant summer residences. Locate also Staten and Coney.

3. Surface. Most of this region is situated in the Eastern Highland, and has a rough surface. The Adirondacks and Catskill Mountains are irregular clusters, belonging to the Appalachian System; the principal ranges are the Alleghany and Blue. Mount Marcy in the Adirondacks is the highest peak in the group.

b. *Natural Curiosities.* These are: Falls of Niagara, Falls of Trenton, Genesee Falls and Watkins Glen, near Seneca Lake. All the lakes and mountains of New York and the banks of the Hudson are renowned for their beautiful scenery. Howe's Cave, forty miles from Albany, is celebrated as one of the most extensive caves known, after the Mammoth Cave of Kentucky. It has been explored three and one-half miles. It contains a lake one-fourth of a mile long, a "bottomless pit" and a "rotunda." This is a circular room, so high that a rocket warranted to burst at 300 feet just shows the top of the ceiling. Near lake Champlain is Ausable Chasm, described by tourists as of great beauty and grandeur.

4. Lakes. There are many beautiful and picturesque lakes

in New York. The largest ones are Ontario, Erie Champlain, George, Oneida, Cayuga, Seneca, Chatauqua.

5. Rivers. The rivers are numerous and the largest ones are important commercial routes. The largest are the St. Lawrence, Hudson, Niagara, Genesee, Delaware, Susquehanna, Potomac, Ohio, Monongahela, Alleghany.

6. Soil. The northern part of New York, as well as the most mountainous portions of the group, is not productive. The rest is very fertile.

7. Climate. The climate in the northern part of New York is cold, but it becomes rapidly warmer as you travel toward Maryland.

8. Productions. a. *Agricultural.* Corn, grain and fruits are raised in abundance. The leading pursuit in New Jersey and Delaware is the raising of garden vegetables for the New York markets. More than one-half of the cranberries used in the United States come from New Jersey. New York exceeds all the other States in dairy products and hops.

b. *Mineral.* Pennsylvania produces two-thirds of all the coal, three-fifths of all the iron, and nearly all the petroleum in the United States. Here are also the far-famed oil-wells, Great quantities of salt come from New York.

c. *Manufactured.* The abundance of minerals, numerous rivers and facilities for commerce, make this section rank first in manufactures. New York is the first state in the union in manufacturing.

9. Commerce. On account of its navigable rivers, fine harbors and Erie Canal, no section of the United States can compare with this in commerce. More than one-half of the foreign commerce of the United States is carried on at New York City.

10. Animals. The domestic animals will not again be referred to as they are usually the same. In the mountainous

regions the wolf, panther, wild-cat, lynx, etc. are found, and the fishing is excellent.

11. Inhabitants. Agriculture is the chief employment, but many thousands are engaged in commerce, manufacturing and mining.

12. State Characteristics. New York, the Empire State, is the first state in the Union in dairy products, wealth, population, commerce and manufactures.

New Jersey, the Garden State, produces great quantities of fruit and vegetables, and is also noted for its zinc.

Pennsylvania, the Keystone State, is one of the richest regions of the world in coal, iron and petroleum. It is the first state in the Union in mining, the second in population and manufactures.

Delaware is next to the smallest state in the Union and like New Jersey is noted for its fruits and vegetables.

Maryland is cut nearly in two by the Chesapeake bay, which is noted for its oyster fishing. This state produces large quantities of tobacco.

13. Cities. *New York.* Albany is the capital. New York is the largest city in the United States and the fifth city in size in the world. Ward's and Blackwell's islands in the harbor belong to the city, and are occupied by asylums and reformatories. Bedloe's and Governor's islands belong to the United States. A garrison is stationed in a fort on Governor's island. Bartholdi's Statue of Liberty is on Bedloe's island. No city can boast of a finer park than Central Park, which is two and one-half miles long and one-half mile wide. New York is called the Metropolitan City, and is first in commerce and manufacturing. Brooklyn is the third city in size in the United States and is connected with New York by the largest suspension bridge in the world. Buffalo is noted for its lake trade. Syracuse is noted for its salt-works. Saratoga

is a celebrated summer resort. The springs at Saratoga are among the natural curiosities of the world. There are twenty-eight of these mineral springs, no two of which are exactly alike. At West Point is the celebrated United States Military Academy. Other important cities are Rochester, Troy and Utica.

New Jersey. Trenton is the capital. Jersey City is the largest city and is closely connected with New York City, because it is the terminus of many railroads and steamship-lines which cannot find room in New York. Newark manufactures jewelry, rubber goods and pottery. Paterson is noted for its large silk manufactories. Other cities are Camden, Hoboken, Elizabeth.

Pennsylvania. Harrisburg is the capital. Philadelphia is the second city in the United States in population and manufactures. Many historical events are connected with it. Here is Independence Bell and here the Declaration of Independence was signed. Here was held the Centennial Exhibition. In what year? Pittsburgh and Alleghany are so closely connected as to be really one city in industries. They are the center of the coal, iron and petroleum trade. Other cities are Scranton, Reading and Erie.

Delaware. Dover is the capital. Wilmington is the largest city, and its manufactures include cars, steam-engines and gunpowder.

Maryland. Annapolis is the capital and contains the United States Naval Academy. Baltimore is the largest city and exports tobacco, canned fruit, and oysters.

District of Columbia. The District of Columbia is situated on the north bank of the Potomac River, and was formerly a part of Maryland. It contains Washington, the capital of the United States. After whom was it named? The capitol is one of the finest structures on the continent, and covers

three and one-half acres. The city also contains many other fine buildings and Washington Monument, the highest stone monument in the world.

14. History. In 1609, Henry Hudson, an English navigator in the employ of the Dutch, sailed up the Hudson River, and in 1613 a trading-post was established on Manhattan Island. It was in this group of states that most of the fighting was done during the Revolution. Trenton is noted for the capture of the Hessians by Washington. Gettysburg, Pennsylvania, was the scene of one of the most important battles of the Civil War.

15. Language and Object Lessons. For reproduction read "Independence Bell," descriptions of the battle of Trenton the battle of Germantown, the battle of Long Island, the battle of Princeton, Capture of Fort Du Quesne, William Penn and the Indians, the winter in Valley Forge, the wild scenery of New York's lakes and mountains, Niagara Falls, Bartholdi's Statue, Erie Canal, Washington Monument, and lives of distinguished men. Continue comparisons and journeys. — Where are oyster fields? Does the oyster breathe? Can it move?

II. — THE SOUTH ATLANTIC STATES.

1. Position. Boundaries of group and of each state. Progressive map drawing.

2. Coast. Everywhere it is low and flat. The coast of North Carolina is dangerous to navigators on account of shoals. Nearly all the coast is protected by long, narrow sand-bars, (formed by the opposing action of waves and rivers), or by reefs of coral.

a. *Ocean.* Atlantic.

b. *Gulf.* Mexico.

c. *Bays.* These are Chesapeake, the largest inlet on the coast of the United States, Tampa, Appalachee.

d. *Strait.* Florida.

e. *Sounds.* Albemarle, Pamlico.

f. *Capes.* Charles, Henry, Hatteras, Lookout, Fear, Sable.

g. *Islands.* There are many low and sandy islands, but some are very fertile and produce the famous sea-island cotton. The Florida Keys is a large group of coral islands, inhabited by fishermen. Locate also Roanoke.

h. *Peninsula.* Florida.

3. Surface. The land along the coast is low and marshy, including the Dismal Swamp, the Green Swamp, Okefinokee Swamp, and the Everglades. In these swamps we find the cypress, the palmetto and the magnolia. Next is a sandy belt covered with pines and called the Pine Barrens. Next is a strip of very fertile land known as the Uplands, or Piedmont Lands, and still farther west is a mountainous region.

a. *Mountain Ranges.* These are the Blue Ridge, Alleghany, Cumberland, Iron or Smoky. These belong to the Appalachian System.

b. *Peaks.* The highest peak is Mitchell in North Carolina, the highest land east of the Mississippi River.

c. *Natural Curiosities.* In the mountains are numerous caves, cataracts and beautiful landscapes. The Enchanted Mountains, spurs of the Cumberland, have footprints of animals in the solid rock. The feet have six toes and the track is sixteen inches long. We have in Virginia the Natural bridge and many large caves. Luray, in many respects, surpasses the Mammoth Cave. Here also is a lake, one and one-half miles in circumference and 600 feet deep, on the top of a mountain. In the Raccoon Mountains in Georgia is the Nicojack Cave. The floor is covered with a stream of cool water, so that it is accessible only in boats. It has been ex-

plored three miles to the foot of a cataract. Florida contains many springs of great size. The Great Spring is over 1200 feet deep, transparent and cold.

4. Lakes. There are many lakes in Florida, some of which are noted for their transparency. Okeechobee is the largest. Attempts are now being made to drain the lake in order to use the rich land for the production of cotton.

5. Rivers. There are many rivers, all navigable through the tide-water section. Potomac, James, Roanoke, Cape Fear, Pedee, Santee, Savannah, St. John's, Chattahoochee, Appalachicola.

6. Soil. See Surface.

7. Climate. The summers are long and hot; the winters are mild, although in Florida even in winter the heat is often oppressive.

8. Productions. a. *Agricultural.* From the heavy forests of yellow pine we get tar, pitch, turpentine and lumber. Tobacco, rice, cotton, corn and sweet potatoes are among the other products.

b. *Mineral.* Gold, iron and coal are found in the mountains, but not in very large quantities. Coral is obtained from Florida.

c. *Manufactured.* There were few manufactures before the Civil War, but now they are rapidly increasing, particularly in Georgia.

9. Commerce. Charleston, Savannah and Wilmington are the chief sea-ports. The exports are cotton, sugar, rice, sweet potatoes, lumber and naval stores, i. e., tar, pitch, and turpentine. The imports are manufactured goods, wheat, ice, and northern fruits.

10. Animals. Alligators and rattlesnakes are common. Deer, wild turkeys and waterfowl are abundant.

11. Inhabitants. a. *Race.* About two-fifths of the popu-

lation are negroes. The remainder are of English descent, though there are many Spanish Creoles in Florida.

b. *Occupation.* Agriculture is the chief employment. In Florida the taking of sponges and turtles is an important occupation, as well as tobacco manufacturing.

13. State Characteristics. Virginia, the Old Dominion, is a leading tobacco state; but the inhabitants near the Chesapeake Bay are engaged in oystering.

North Carolina is noted for its production of tar, pitch and turpentine.

South Carolina, the Palmetto State, ranks first in the production of rice.

Georgia ranks second in the production of cotton, and of all the Southern States ranks first in manufacturing.

Florida, the Peninsula State, is a great winter resort. It is noted for its mild climate, and its oranges, sponges and turtles.

13. Cities. *Virginia.* Richmond is the capital and largest city and noted for its tobacco trade. It was the capital of the Confederate States during the Civil War. Norfolk is the chief sea-port of Virginia, situated on one of the finest harbors in the United States. Mount Vernon, the burial place of Washington, is on the Potomac, fifteen miles from the capitol. Steamers always toll their bells in passing, and war-vessels salute with cannon. Locate also Petersburg and Roanoke.

North Carolina. Raleigh is the capital. Wilmington is the largest city and an important sea-port.

South Carolina. Columbia is the capital. Charleston is the largest city and an important sea-port and rice market.

Georgia. Atlanta is the capital and largest city. It is also a railroad and manufacturing center and noted for its mild climate. Savannah has a fine harbor and ranks second as a cotton port. Augusta and Columbus are important cotton manufacturing cities.

Florida. Tallahassee is the capital. Key West is the largest city and the most southern city in the United States. It is an important naval station and noted for its sponges and tobacco manufactures. St. Augustine is the oldest settlement in the United States, and next to Santa Fe the oldest town. Locate also Pensacola.

14. History. It was in Florida that the first settlement was made in the United States, at St. Augustine, by the Spaniards in 1565. The first permanent English settlement was at Jamestown in 1607. Georgia was the last of the thirteen original states to be settled.

15. Language and Object Lessons. Continue journeys and comparisons. For reproduction read interesting accounts of the lives of the early explorers, settlers and distinguished men. Read about Ponce-de-Leon and "the Fountain of Youth," De Soto and the Mississippi, the attack on Fort Sumter. For object lessons use these topics: cotton, sugar, rice, tobacco, opossum, turpentine, alligators, sponge, coral, cotton-gin, cyclones, Washington Monument.

III. — SOUTH CENTRAL STATES.

1. Position. Boundaries. Progressive map.

2. Coast. It is low and flat. Shifting sand-bars hinder navigation.

a. *Gulf.* Mexico.

b. *Bay.* Mobile.

c. *Sound.* Mississippi.

3. Surface. Most of this section has a low, level surface because it belongs to the Low Central Plain. The eastern part reaches into the Eastern Highland.

a. *Mountain Ranges.* See Topic II., Section 3, a.

b. *Natural Curiosities.* There are many interesting caves, the most noted being Mammoth Cave in Kentucky. In Ala-

bama there is a natural bridge which crosses a chasm 120 feet wide and 70 feet high.

4. Rivers. The Ohio and Mississippi are the most important rivers of this section, and they are noted for their commercial facilities. The Mississippi is a mighty sediment-bearing flood flowing through rich "bottom lands." Much of the surrounding country is below the level of the river at high water. The river is held in its place by high banks called levees. These sometimes break away, when the river floods the country, doing much damage. Flowing through the broad delta of the Mississippi are many secondary outlets called bayous. The mouth of the river is being extended out in the Gulf of Mexico at the rate of several feet a year. The delta now extends one hundred miles into the Gulf.

Other important rivers are Big Sandy, Kentucky, Cumberland, Tennessee, Pearl, Mobile, Alabama, Tombigbee, Chattahoochee.

5. Soil. The soil is very fertile except in the mountains.

6. Climate. Here are mild winters and long, hot summers. Some parts have an unhealthy climate.

7. Productions. a. *Agricultural.* The chief productions are cotton, corn, tobacco, hemp and sugar.

b. *Mineral.* All along the eastern highland we find abundance of coal and iron. Tennessee is said to contain two hundred varieties of marble.

c. *Manufactured.* Sugar and molasses are the chief manufactures.

8. Commerce. There is much commerce carried on by means of its numerous navigable rivers. Cotton, sugar and tobacco are the chief exports.

9. Animals. See South Atlantic States.

10. Occupations. The chief occupation is agriculture, with some mining in Alabama and Tennessee.

11. State Characteristics. West Virginia is rich in coal, iron, salt and petroleum.

Kentucky ranks first in the Union in tobacco, hemp and fine-bred horses.

Tennessee is noted for its minerals and marbles in the eastern part; while cotton and tobacco grow in the western part.

Alabama is rich in coal and iron. It is the leading mining state in the South.

Mississippi is noted for its "bottom lands" and bayous. It is the first state in the production of cotton.

12. Cities. *West. Virginia.* Charleston is the capitol. Wheeling is the largest city and noted for its iron-works.

Kentucky. Frankfort is the capital. Louisville is the largest city. It is the largest tobacco market in the world and has one of the deepest artesian wells in the world. Lexington is situated in the famous blue-grass region. Locate also Covington.

Tennessee. Nashville is the capital and largest city. Memphis is an important river-port.

Alabama. Montgomery is the capital. Birmingham is situated in the mining region. Mobile is an important cotton port, and probably the largest city.

Mississippi. Jackson is the capital. Vicksburg is the largest city and an important river-port. It is noted for the memorable siege in the Civil War. Natchez is also an important river port.

13. Language Lessons. Comparisons and journeys as usual. Of the distinguished men in this group only two are very important, both from Kentucky: Abraham Lincoln, President of the United States, and Jefferson Davis, President of the Confederate States. Read something about their life and work. Give object lessons on the productions.

IV. — NORTH CENTRAL STATES.

1. Position. Boundaries. Progressive map.

2. Coast. This group of states has no sea-coast but a very large lake-coast.

a. *Bays.* Green, Saginaw.

b. *Strait.* Mackinac.

c. *Islands.* The Royal Isle contains copper mines. The Apostle Islands contain many interesting caves.

3. Surface. It consists usually of rolling prairies. There are no mountains.

a. *Natural Curiosities.* In Indiana is the celebrated Lost River, which suddenly sinks into the ground and after a distance of eleven miles reappears again. In the southern part of Indiana are hills called "knobs," in the vicinity of which are the famous sink-holes. These are funnel-shaped pits, varying from a few yards to a quarter of a mile in diameter, usually leading to caves or underground streams. Here also are the Epsom Salt and the Wyandotte caves. In Ohio are the celebrated mounds built by the Mound Builders, who lived in the United States before the Indians. On the shore of Lake Superior are the Pictured Rocks. They are a series of bluffs, exhibiting the appearance of towering walls, ruins, caverns, etc. They extend twelve miles and are about 300 feet in height. The color of the rocks is varied. The waves have worn the rocks into deep caverns, which receive the waters with tremendous roar. Cascades fall from the rocks, and in some places boats can pass between the waterfalls and the shore.

4. Lakes. The boundary line between the United States and Canada passes through all the great lakes except Michigan, which is wholly in the United States. Of these lakes, Superior is the largest and Ontario the smallest. All these lakes are connected; Erie and Ontario by the Niagara River, the falls of which are avoided by the Welland Canal in Canada. There

are thousands of small lakes in Michigan and Wisconsin. Locate St. Clair.

5. Rivers. All the western rivers, particularly the Ohio, are subject to great freshets. Locate Mississippi, Ohio, Scioto, Miami, Maumee, Wabash, Illinois, Wisconsin, Fox, Grand, St. Croix, St. Clair, Detroit.

6. Soil. These states contain most fertile soil.

7. Climate. The climate is marked by great extremes. Tornadoes and blizzards frequently sweep over the prairie region. This region is not considered unhealthy, because the air is so dry and pure.

8. Productions. a. *Agricultural.* This section, with the West Central States, is the greatest agricultural region in the United States, producing large quantities of wheat, corn, oats, barley, rye, potatoes, tobacco, fruits, cattle, sheep, hogs. In Michigan and Wisconsin are large forests of pine, button-wood black walnut, etc.

b. *Mineral.* The iron and copper deposits of Lake Superior rank among the best in the world. Large fields of bituminous or soft coal are found in nearly all the western states. Lead, salt, and petroleum are also found.

c. *Manufactured.* The manufactures are extensive, and consist chiefly of agricultural implements, furniture, lumber and machinery. Ohio, Indiana, Illinois are ranking among the first states in the Union in the value of their manufactures.

9. Commerce. Commerce is carried on by means of canals, rivers, lakes and railroads. The lake trade is very large. There are many canals; the chief ones are the Ohio, the Wisconsin, connecting the Fox and Wisconsin, and one connecting Chicago with the Illinois River.

10. Animals. The wild animals, particularly bisons, are no longer common. Why? The bear, deer, elk and cougar are occasionally found.

11. Inhabitants. a. *Race.* There are here found separate communities from almost every country in Europe. The English-speaking people, however, are the most numerous.

b. *Occupations.* Agriculture is the chief employment of the people, but mining, manufacturing and commerce are carried on.

12. State Characteristics. Ohio is the first state in the production of wool; in the value of its farms it is the wealthiest; as a manufacturing state it ranks fourth.

Indiana has valuable coal-mines and is an agricultural and lumbering state.

Illinois is the first state in agriculture and miles of railroad.

Michigan, the Peninsula State, borders on four of the Great Lakes. It is the first state in the production of copper and iron ore. It also produces large quantities of lumber and salt.

Wisconsin is noted for its lakes, lumber and wheat-farms. It has a very dry and healthy climate.

13. Cities. *Ohio.* Columbus is the capital. Cincinnati is the largest city. It is a beautiful city, the center of a large trade, and engaged in manufacturing. Cleveland is one of the great lake-ports, containing large smelting and oil-refining works. Locate also Toledo and Dayton.

Indiana. Indianapolis, the capital and largest city, is a great railway center and the largest city in the United States not on navigable waters. Locate also Evansville, Fort Wayne and Terre Haute.

Illinois. Springfield is the capital. Chicago is the largest city and the greatest grain, lumber and pork market and railway center in the world. It is called the second commercial city of the Union, and the third manufacturing center. More than 1000 trains enter the city every day during the busy season. Other cities are Peoria and Quincy.

Michigan. Lansing is the capital. Detroit is the largest

city and has the finest harbor on the lakes. Grand Rapids is noted for its lumber and water-power.

Wisconsin. Madison is the capital. Milwaukee is the largest city. It is sometimes called the Cream City, because the bricks used in building are of a peculiar cream-color.

14. Language and Object Lessons. Continue descriptions of journeys, pictures and all natural curiosities, also canals, rivers, lakes, productions, animals, grain-elevators, battle of Lake Erie, great fire in Chicago.

V. — WEST CENTRAL STATES.

1. Position. Boundaries. Progressive map.

2. Coast. Louisiana is the only state of this group that has a sea-coast Minnesota has a lake-coast.

a. *Gulf.* Mexico.

b. *Bays.* Barataria, Vermillion.

3. Surface. The surface consists mostly of rolling and wooded land. The only mountains are the Ozark in Missouri. In the northern part of Minnesota is the Height of Land, the water from which finds its way either into the Gulf of Mexico, the Gulf of St. Lawrence, or the Hudson Bay.

a. *Natural Curiosities.* In Arkansas are the celebrated Hot Springs. There are about 100 of these springs with an average temperature of 150 degrees. In the same regions are also springs of cold water, so that a person can sit with one hand in a hot spring and the other in a cold one. These springs are noted for their curative powers. Iron Mountain and Pilot Knob are masses of iron ore several hundred feet in height and covering many acres. The Falls of St. Anthony and Minnehaha are quite celebrated.

4. Lakes. There are many lakes in this region. In Minnesota there are at least ten thousand lakes. Recent surveys prove that Lake Glazier, or Elk Lake, is the real source of the

Mississippi River instead of Lake Itasca. The lakes of Louisiana are shallow and are usually called lagoons. When the water in the Mississippi River is high these lagoons are filled and hold the water like reservoirs, but are nearly drained again during the dry season. Locate Superior, Lake of the Woods and Pontchartrain.

5. Rivers. No region in the world is so plentifully supplied with navigable rivers. The Red River of the North, Mississippi, Missouri, Des Moines, White, Arkansas, Red and Sabine are the most important.

6. Soil. The soil is rich and productive.

7. Climate. In the southern part the summers are hot and the winters mild. Along the coast the heat is tempered by the winds from the Gulf. In the northern part the climate is like that of the North Central States.

8. Productions. a. *Agricultural.* In the northern part of this group we find all kinds of grain; in the southern part cotton and the sugar-cane.

b. *Mineral.* Near Vermillion Bay there is a mass of pure rock-salt covering 144 acres and of unknown depth. Arkansas is said to contain every known mineral. Large deposits of iron are found in Iron Mountain and Pilot Knob. Here also are found lead and zinc.

c. *Manufactured.* The most important manufactures are flour and those connected with the preparation of cotton.

9. Commerce. Commerce is extensively carried on by means of its large navigable rivers and lines of trunk-railroads.

10. Animals. See North Central States.

11. Inhabitants. See North and South Central States.

12. State Characteristics. Minnesota is celebrated for its picturesque lakes and forests, dry atmosphere and great wheat farms.

Iowa has a fertile, rolling surface, and produces corn and hogs in large quantities.

Missouri ranks next to California in grapes and wine. It is very rich in minerals, and in commerce and manufactures it excels every other state west of the Mississippi River.

Arkansas is noted for its mineral springs. The resources of the state have not been developed.

Louisiana is the first state in the Union in the production of sugar.

13. Cities. *Minnesota.* St. Paul, the capital, and Minneapolis, the largest city, are called Twin Cities. They are rival cities. St. Paul is at the head of navigation of the Mississippi River. Minneapolis is a great wheat market and flour-producing city. Duluth is a lake port. Locate also Winona.

Iowa. Des Moines is the capital and largest city. Dubuque is the center of the lead region. Locate also Davenport, Burlington, Council Bluffs.

Missouri. Jefferson City is the capital. St. Louis is the largest city wholly in the Mississippi Valley. It is noted for its flour-mills. The water parting between the Mississippi and St. Lawrence river basin approaches in some places so near to Lake Michigan that a large part of Chicago is situated in the Mississippi river valley. Kansas City is a railway center. Locate also St. Joseph.

Arkansas. Little Rock is the capital and largest city.

Louisiana. Baton Rouge is the capital. New Orleans, the "Crescent City," is the largest. None of the houses have cellars, because the city is built on marshy ground. The city is protected from the high water of the Mississippi by levees, which are from fifteen to fifty feet wide on top, thus furnishing delightful promenades. It is the leading cotton-market in the world, and the greatest sugar-market in the United States.

14. History. The Mississippi River was discovered by De Soto in 1541. Joliet, a French trader, and Father Marquette, a Jesuit missionary, floated down the river in a birch canoe and

took possession of the land in the name of the King of France. Louisiana was then a vast territory embracing all the land west of the Mississippi that did not belong to Mexico. We bought it for fifteen million dollars from France.

15. Language Lessons. Continue descriptions of journeys, pictures, and comparisons. For reproduction, read about the picturesque scenery, the sufferings of the Jesuit missionaries among the Indians, the cities, and any item of information. Show the climate necessary for the production of wheat, and lead the children to see that wheat districts cannot therefore produce rice or cotton.

VI. — STATES OF THE PLAINS.

1. Position. Boundaries. Progressive map.

2. Coast. Texas alone has a coast.

a. *Gulf.* Mexico.

b. *Bay.* Galveston.

3. Surface. As the name indicates, the surface consists of high, rolling plains reaching into the Rocky Mountains. In Texas the plain is called the Llano Estacado or Staked Plain.

a. *Mountains.* The chief highlands are the Black Hills.

b. *Natural Curiosities.* There is a sterile region 100 miles long and 30 wide in Dakota, extending into Nebraska, called the "Bad Lands." The country around is an elevated plain, but this section has been sculptured by running water into domes and monuments of every conceivable shape. The Devil's Lake in Dakota is a sheet of salt water sixty miles long and fifteen wide, surrounded by sandy beaches, making it a celebrated summer resort.

4. Lakes. There are none of any importance.

5. Rivers. Missouri, Platte, Kansas, Arkansas Canadian, Red, Sabine, Rio Grande, Trinity, Brazos, and Nueces are the most important rivers.

6. Soil. The soil of this section is better adapted to grazing than agriculture.

7. Climate. It is very cold in the northern part and warm in the southern. Pembina, Dakota, is said to be the coldest place in the United States. Throughout this region the cattle feed out all winter, many thousands of them, however, dying from cold and starvation.

8. Productions. Wheat and corn are raised in the northern part and cotton in the southern part, but stock-raising is the most important industry.

There are a few minerals, but little or no manufacturing. Gold is found in the Black Hills.

9. Occupations. Agriculture and stock-raising are the chief occupations.

10. State Characteristics. Dakota contains excellent wheat land. A bill has been passed in Congress dividing Dakota into two parts, and admitting each as a state, to be called North and South Dakota.

Kansas and Nebraska are important farming and grazing states.

Indian Territory is a tract of land set apart by Congress for the exclusive use of certain tribes of Indians. The most important tribes are the Cherokees, Choctaws, Chickasaws, Creeks and Seminoles. Many of these are wealthy farmers and stock-raisers. They make their own laws.

Texas is the largest state in the Union, nearly thirty-six times as large as Massachusetts. It surpasses all other states in the number of its cattle.

11. Cities. *Dakota.* Bismarck is the capital and Fargo the largest city in North Dakota. Yankton expects to be the capital of South Dakota.

Nebraska. Lincoln is the capital. Omaha is the largest city and an important grain-market.

Kansas. Topeka is the capital. Leavenworth is the largest city. Locate also Atchison and Kansas city.

Indian Territory. Tahlequah is nominally the capital. It has no real capital.

Texas. Austin is the capital. Galveston, situated on an island in Galveston Bay, is the largest city and an important seaport. Locate also San Antonio, Dallas.

12. History. The land between the Nueces and Rio Grande rivers was the territory about which Mexico and the United States once disputed, and finally went to war to settle the trouble. The United States won every battle of the war; and at the close Mexico gave us a large tract of land, known as California, which included the present state of California and several other states.

13. Language. Continue to urge the pupils to bring to school pictures of cities and places studied. Read accounts of journeys, cowboys, cattle ranches, etc. At Fargo, Dakota, is a large grain farm, forty miles long and one wide, and form ing one continuous wheat-farm. Read interesting descriptions of such farms.

VII. — WESTERN STATES. *Rocky Mountain Division.*

1. Position. Boundaries. Progressive map.

2. Surface. It is rugged because crossed by the Rocky Mountains.

a. *Peaks.* The highest are Sierra Blanca, Torrey's, Lincoln, Harvard, Long's, Umcompahgre, Pike's.

b. *Parks.* The mountains of Colorado enclose a series of remarkable valleys called parks. Most of them are small, but some are 50 miles wide. The best known are North, South, Middle and San Luis.

c. *Natural Curiosities.* Some of the grandest scenery in the world is to be found in the Western States. Colorado is

celebrated for its grand views, mineral springs, and beautiful colored rocks. But nowhere in the world are so many interesting objects crowded into one small space as in the National Park. It is 65 miles long and 55 wide, and has been set aside as a national pleasure-ground. "Here are mountains and valleys; beautiful lakes, deep cañons, and lofty cataracts; thundering geysers and peaceful rivers; lakes of mud and transparent waters; petrified forests, mineral springs; everything that is grand and sublime." There are 1,000 geysers and hot springs, one of them, the Giantess, sending up jets of hot water 250 feet high. The Gates of the Rocky Mountains are narrow gorges through which the Missouri flows. The river is here only 450 feet wide, flowing between perpendicular walls of rocks 1,200 feet high, and there is only one place where a foothold can be obtained. The Falls of Missouri are also noted.

3. Rivers. This group of states is crossed by the divide between the Pacific and Gulf systems. Hence there are found here only the beginnings of large rivers, as Missouri, Platte, Yellowstone, Grand, Rio Grande, Arkansas.

4. Soil. The soil is not fertile.

5. Climate. The air is dry and pure, and, though subject to sudden changes of temperature, the climate is very healthful, particularly to consumptives.

6. Productions. a. *Agricultural.* Little or nothing is raised here except cattle.

b. *Mineral.* Gold, silver, iron, tin, lead and coal are found in all this region. Colorado ranks first in the Union in silver.

7. Animals. The grizzly, brown and black bears, puma, mountain sheep, deer, antelopes, panthers, and coyotes, are the principal wild animals.

8. Inhabitants. a. *Race.* They consist mainly of immigrants from the eastern states and from Europe.

b. *Occupation.* Mining is the principal occupation. Stock-raising is extensively carried on.

9. State Characteristics. Montana is rugged and mountainous, containing many celebrated cañons.

Wyoming is celebrated for the Yellowstone National Park. Both Wyoming and Montana furnish fine pasturage.

Colorado, the Centennial State, is noted for its parks, medicinal springs, fine climate, and abundance of minerals.

New Mexico contains many interesting remains of an ancient civilization, as cliff-dwellers, etc. The population is chiefly Mexican and Indian.

10. Cities. *Montana.* Helena is the capital. Butte City is a mining center.

Wyoming. Cheyenne is the capital and largest city.

Colorado. Denver is the capital and largest city. Leadville is 10,000 feet above the sea-level, and is therefore one of the highest cities in the Union. Because of its elevation the air is so rare that water boils at 20 degrees lower temperature than at the sea-level, making it very difficult to prepare food by boiling.

New Mexico. Sante Fe is the capital and largest city. It is the oldest town in the United States, but the second oldest settlement.

11. Language Lessons. Give object lessons on the cactus minerals and animals. Compare the Rocky Mountains with the Alleghany. Journeys and descriptions as usual. Give many lessons upon the wonders of the Yellowstone Nationa Park.

VIII.—Western States. *Basin Division.*

1. Position. Boundaries. Progressive map.

2. Surface. The surface is rough and rugged, being crossed by many mountain ranges. The Wahsatch Mountains in Utah are the most important.

a. *Natural Curiosities.* In Arizona we find the grand cañons of the Colorado, from 2,000 to 6,000 feet high. In Idaho are the Shoshone Falls, in a cañon 70 miles in length. There are a series of cataracts, the first of which makes one unbroken plunge of 180 feet, and the last 225 feet. We have here then a cataract higher than Niagara, and one of the greatest wonders of the world. The Niagara river falls 225 feet in 25 miles. The Snake river descends 500 feet in four miles.

3. Lakes. These are numerous but not large. Great Salt Lake is the best known, and is about the size of the state of Connecticut. The western shore consists of level plains of soft mud, crossed by rills of salt and sulphur water. These plains have no vegetable life except small shrubs covered with shining particles of salt. The water contains 20 per cent of salt, and is so heavy that a man cannot sink in it. The water of Utah Lake, which is fresh, flows into Salt Lake through the Jordan river. Why is one lake fresh and the other salt? Lake Tahoe is called a gem in the mountains, and is one of the most beautiful lakes in the world; it is 6,000 feet above the sea-level.

4. Rivers. The rivers either disappear in the desert or flow into lakes called sinks, as the Humboldt. The Snake and Colorado are exceptions.

5. Soil. The soil, on account of lack of water, is barren. Why does it not rain? Large crops are raised by means of irrigation.

6. Climate. The climate is similar to that of the Rocky Mountain states. The lowlands of Arizona have the hottest climate in the United States.

7. Productions. Owing to lack of moisture, agriculture can be carried on only by means of irrigation. In Utah large crops of grain, hay, fruit and vegetables are produced. Nevada is quite rich in gold and silver, and contains large deposits of rocksalt.

8. Animals. See Rocky Mountain States.

9. Inhabitants. See Rocky Mountain States.

10. State Characteristics. Idaho is remarkable for the picturesque scenery of its lakes, mountains, and waterfalls.

Utah is noted for the Great Salt Lake and for being the home of the Mormons.

Nevada is the third state in size, and is rich in silver mines.

Arizona is noted for its cañons and silver mines, and, like New Mexico, contains many ruins.

11. Cities. *Idaho.* Boise City is the capital and largest city.

Utah. Salt Lake City is the capital and largest city. Ogden City is a railway center.

Nevada. Carson City is the capital, and Virginia City is the largest city.

Arizona. Prescott is the capital and Tucson is the largest city.

12. Language and Object Lessons. Same as usual.

IX. — WESTERN STATES. *Pacific Division.*

1. Position. Boundaries. Progressive map.

2. The coast is much less broken than that of the eastern shores of the United States, but there are several excellent harbors, the best being the Bay of San Francisco.

a. *Ocean.* Pacific.

b. *Bay.* San Francisco. The entrance to this bay is called the Golden Gate.

c. *Strait. Sound.* Juan de Fuca, Puget.

d. *Capes.* Flattery, the most western point of the United States except Alaska, Blanco, Mendocino, Pt. Conception.

e. *Islands.* Santa Barbara and many others. All the islands are inhabited by sea-birds.

3. Surface. We find here fertile valleys and lofty peaks.

a. *Mountain Ranges.* The Coast Range lies near the coast, and the peaks are not so high as those of the other ranges. The Cascade Range derives its name from the numerous cascades. The Sierra Nevada, meaning snow-clad range, contains the highest peaks in the United States, not including Alaska, and is noted for its picturesque scenery.

b. *Peaks.* These are Whitney, Shasta, Hood, Lyell, Tacoma, Tyndall.

c. *Natural Curiosities.* The Mammoth Trees of California are among the greatest wonders of the world. Some are 30 feet in diameter and from 250 to 300 feet high. The Yosemite valley contains many objects of great interest, besides the Yosemite Falls, which in three perpendicular leaps falls a distance of 2,550 feet. California contains five natural bridges. Washington contains large glaciers. All the western states are full of interesting objects which cannot here even be named.

4. Lakes. There are many small lakes noted for their beauty and the great quantity of fish in them. Tulare is the largest.

5. Rivers. The Columbia is noted for its rapids, salmon and trout; the Willamette is noted for the same reason. The Colorado is noted for its cañons. The Big Cañon has a steep wall on each side of the river from 2,500 to 4,000 feet high These rocks are of many shapes and colors. Locate also the Sacramento and San Joaquin rivers.

6. Soil. The soil in the river-valleys is very fertile.

7. Climate. On the Pacific coast it is much warmer than in corresponding latitudes in the Eastern States, owing to the warm ocean winds.

8. Productions. a. *Agricultural.* Large, extensive plains in Oregon and Washington furnish excellent pasturage. California is noted for superior fruits of all kinds and for extensive vineyards.

b. *Mineral.* California is the first state in the Union in the production of gold. Its quicksilver mines are the richest in the world.

c. *Manufactured.* The manufactures are flour, lumber, woolens, wines, and cigars.

9. Commerce. Several lines of ocean steamers run from San Francisco to New York, Melbourne and Japan. It exports its productions and imports teas, coffees and spices from Asia, and manufactured goods from the east.

10. Inhabitants. a. *Race.* The same as in all the Western States, with the addition of many Chinese in California.

b. *Occupation.* Mining and stock-raising are the chief occupations in Washington and Oregon; mining and agriculture in California. At present silk-culture and ostrich-farming are receiving much attention.

11. State Characteristics. Washington and Oregon are noted for their heavy rain-fall, magnificent forests and productive fisheries.

California is the second state in size in the Union and the first in the production of gold, quicksilver, and grapes. It is noted for its natural curiosities already mentioned. California as well as Ohio are great wool and wine producing states, because both sheep and the vine require elevated lands and hillsides in order to flourish.

12. Cities. *Washington.* Olympia is the capital. Seattle is the largest city. Locate also Walla Walla and Tacoma.

Oregon. Salem is the capital. Portland is the largest city and the second commercial city on the Pacific coast.

California. Sacramento is the capital. San Francisco is the largest city, situated on one of the best and most convenient harbors in the world. In 1847 it had 450 inhabitants; in 1880 it numbered 234,000. Why did it grow so rapidly? Los Angeles means the "city of angels." It is noted for its

pleasant climate, its beautiful gardens, and the excellence of its fruit. Locate also Oakland and Sockton.

13. Language Lessons. All the Western States have been thus described: "It embraces the most rugged mountains in the United States, their tops covered with perpetual snow, looking down upon deserts scorched by the summer sun; volcanic fires bursting from cones of eternal ice; valleys of unbounded fertility, and large spaces of desolate rock; mighty rivers of fresh water finding their way to the sea; salt seas imprisoned between rocky, barren wastes; ridges of everlasting sterility, yet sparkling with a profusion of choice minerals." How interesting this can be made for the children. Urge them to read about such scenery and gather items to be told in the class-room. Read travels and show pictures. Compare the mountains, lakes, and rivers of this group with those of the eastern states.

X. — ALASKA.

1. Position.

2. Coast. The coast toward the Arctic Ocean and Bering Sea is low and sandy; the coast of the Pacific is mountainous.

a. *Oceans.* Arctic, Pacific.

b. *Sea.* Bering.

c. *Strait.* Bering.

d. *Capes.* Barrow, Prince of Wales.

e. *Islands.* There are over 2000 islands around Alaska. The Aleutian Islands are only a continuation of the Alaskan Mountains; nearly all of them are volcanic. The Pribiloff Islands furnish nearly all the seal-skins used in the world.

3. Surface. The interior of Alaska has not been carefully explored. There are said to be sixty-one volcanoes, ten of them being active. Mt. St. Elias is the highest peak in North America. It is 19,500 feet high. Mts. Fairweather, Cook, and Crillon are high mountains.

4. Lakes. These are said to be numerous. Why are they of little account?

5. Rivers. The largest river is the Yukon, which is said to have a greater volume of water than any other river in North America.

6. Soil. The soil is of course barren, because it is rugged and so far north.

7. Climate. The climate on the Arctic coast is severe, but on the Pacific coast it is remarkable for its mildness, when we remember how far north it is. Great quantities of rain fall. At Sitka there are said to be from 225 to 285 rainy days each year.

8. Productions. There are heavy forests of pine, fir, birch and poplar. Oats and barley grow on the Pacific coast. The rivers, as well as the sea, are full of valuable fish. It is said that the waves cast enormous quantities of fish ashore, in heaps three or four feet high.

b. *Mineral.* Iron, coal, gold and sulphur are found in large quantities.

9. Animals. All kinds of fur-bearing animals are common. Here are also large numbers of sea-birds. The fur-seal is the chief source of wealth.

10. Inhabitants. The total population is 31,000. There are about 400 white people; the remainder are Esquimaux and Indians.

11. Government. Alaska is an organized territory of the United States. Its governor and judge are appointed by the President.

12. Towns. Sitka, on Baranoff island, is the capital. It has five hundred inhabitants. Juneau is the largest town.

13. Language Lessons. Comparisons, journeys, and pictures as usual. Give object lessons on animals.

XI. — SOUTH AMERICA.

To the Teacher: Spend considerable time in moulding South America, as suggested in Grade III., before using the Topics.

1. Position, Zones, Extent.

2. Boundaries and Progressive Map.

3. Coast. The coasts are more regular than those of North America; still there are many fine harbors.

a. *Oceans.* Atlantic, Pacific.

b. *Sea.* Caribbean.

c. *Gulfs.* Venezuela, Guayaquil, Darien.

d. *Bay.* Panama.

e. *Strait.* Magellan.

f. *Capes.* Gallinas, St. Roque, Horn, Parina.

g. *Islands.* The Falkland Islands are cold and desolate, but furnish good harbors for whaling ships. The Islands of Tierra del Fuego, or Land of Fire, were named by Magellan from the volcanic fires which are supposed to have been seen by him. They are the homes of numerous sea-fowl and a few ignorant but peaceable natives. Other islands are Juan Fernandez and Chiloe, an important island west of Chili.

4. Surface. South America is noted for its long and lofty range of mountains, its extensive plains, its great rivers, and rich minerals.

a. *Mountain Ranges.* The Andes, meaning copper, follow the western coast, so that from the sea they look like a snow-capped wall. Sixty of the peaks are active volcanoes. The Parime mountains in the north, and the Brazilian mountains in the east, are not as high as the Andes.

b. *Peaks.* There are six peaks over 21,000 feet high. Sorato, also called Illampu, is the highest. Some geographers consider Aconcagua to be the highest peak. Other noted peaks are Chimborazo, Illimani, Gualatieri, Sahama and Cotopaxi.

c. *Plains.* The pampas of La Plata resemble our prairies. During the wet season they are covered with a rich vegetation, but during the dry season they become parched and dry. The selvas of the Amazon are the most extensive forest-regions in the world. So dense are they that it is almost impossible to penetrate them. The whole is so completely interwoven with climbing vines that it would be impossible to pull one tree away from the rest. The llanos of the Orinoco during the rainy season are covered with the finest vegetation, where are found millions of horses, cattle and reptiles. In the dry season the cattle go to the mountains, but the alligators and snakes bury themselves in the mud and remain in a torpid state until the return of the rainy season.

d. *Natural Curiosities.* Mount Pichincha in Ecuador is called "the boiling mountain," and has a crater 2,500 feet deep. Cotopaxi sends up flames from its summit one-half mile in height, while the roar can be heard 600 miles. There are waterfalls in the Andes of 800 feet. At the return of the rainy season, in the llanos of the Orinoco, the moistened clay is seen to rise slowly, then with a noise like that of a small mud-volcano, the earth is cast high in the air and there comes forth a huge-snake or a scaly alligator.

5. Lakes. The largest lake is Titicaca. It is one of the highest in the world. Around it are many old and interesting ruins. Lake Maracaybo is sometimes called a gulf, as it really is.

6. Rivers. The Amazon is the largest river in the world. It is so wide that you can sail on it and be out of sight of land. It has 1500 navigable tributaries. The tide is seen 400 miles from its mouth, while the fresh water of the Amazon is noticed 200 miles out at sea. Sometimes a tide-wave from 15 to 20 feet high rushes up the river with a roar that can be heard many miles, and with such velocity that it destroys all

small boats in its way. On this account it has oftentimes been called the "boat destroyer." Here we find the Victoria Regia, the largest of water lilies. The center is yellow; the inner petals are rose-colored; the rest is snowy white. The flowers are sometimes twelve inches in diameter, while the leaves of the plant are eight or ten feet in diameter.

The other rivers are the Orinoco, meaning coiled serpent, the La Plata, meaning river of silver, the Parana, Uruguay and Madeira. During the rainy season the head-waters of the rivers are so connected that a boat can enter the Orinoco, and come out on either the Amazon or La Plata. The Cassiquiare connects the Orinoco and Amazon.

7. Soil. Owing to the warm climate and amount of rainfall, the soil is everywhere fertile.

8. Climate. Near the equator the temperature is always that of summer. Here reptiles, insects and vegetation multiply rapidly, so that the ripened fruit and opening blossoms can be found together. In the elevated plains throughout the year the temperature is like that of spring. Higher up the mountains it is always winter.

9. Productions. a. *Agricultural.* These are the same as in Central America and West Indies. Here also is found Peruvian bark, from which quinine is made; the manioc plant, from which is made tapioca; and India-rubber in large quantities. A tree is found, which, when tapped, yields a juice white as milk. It is called the cow-tree and is highly prized.

b. *Minerals.* Brazil at one time furnished nearly all the diamonds in the world. Emerald, iron, copper, lead and coal are found in the Andes.

10. Commerce. About one-fifth of the exports come to the United States. The exports are the productions already mentioned, also, hides, horns and tallow from the llanos of the Orinoco, and guano and nitre from Peru.

11. Improvements. There is great need of many improvements, although in some parts, particularly in the Argentine Republic, there are several thousand miles of railway. The roads in the Andes Mountains are very dangerous. Travellers are carried from place to place in chairs fastened to the backs of Indians. Threshing is done by making horses and cattle gallop over the grain.

12. Animals. The animals are the tapir, the ant-eater, llama, jaguar, alpaca, monkey, alligator, condor, parrot and beautiful birds. The llama is used among the Andes Mountains for the purpose of carrying goods. It is so sure-footed that it can travel in places where other animals could not.

13. Inhabitants. The greater part of the inhabitants are descendants of the native Indians, and only partly civilized. Mining and stock-raising are the chief employments. Nature has done so much for this country that the people do but little.

14. Government. All the governments of South America, except that of Brazil and Guiana, are republics, but few of them are prosperous. The government of Brazil is a constitutional monarchy. The Emperor is a wise ruler and Brazil is rapidly rising into importance.

15. Characteristics. Brazil is the largest country in South America, containing nearly one-half of the whole area. It is larger than the United States if we do not include Alaska. Nearly all of the India rubber, and three-fourths of the world's coffee comes from here. Here is the cow-tree; by tapping it the natives get a milk-like juice to drink.

The United States of Colombia borders on two oceans and includes the Isthmus of Panama. It exports Peruvian bark which is the bark of the cinchona tree.

Venezuela was the earliest discovered portion of South America. The Indians of Lake Maracaybo build their houses

on posts driven into the bottom of the lake. This reminded the Spaniards of Venice, so they called the country Venezuela or Little Venice.

Guiana belongs to three different powers of Europe.

Ecuador means equator, and was so called because crossed by it.

Peru is noted for the wealth of its mines and for its numerous ruins of the empire of the Incas.

Bolivia is an inland country rich in minerals. The India-rubber of Bolivia is the finest in the world.

Chili is a narrow strip of country stretching along the Pacific Ocean for 3,000 miles. Silver was discovered there accidentally by an Indian, and was very common a few years ago.

The Argentine Republic is next to Brazil in size. It is growing rapidly in population and commercial enterprise, and is one of the most important countries in South America. It contains the pampas, which are subject to the "pamperos," sudden and violent gusts of winds, which sweep over them with great fury.

Paraguay is an unimportant country having no sea-coast.

Uruguay is the smallest of the South American countries. Cattle-raising is the chief employment.

16. Cities. *Brazil.* Rio Janeiro is the capital and one of the most important cities in South America and the largest coffee-market in the world. Bahia, Pernambuco, now called Recife, and Para, now called Belem, are commercial cities.

United States of Colombia. Bogota is the capital and largest city. Aspinwall and Panama are important ports.

Venezuela. Caracas is the capital and largest city. La Guayra is the seaport. Maracaybo and Angostura, now called Bolivar, are important cities.

Guianas. Georgetown, Paramaribo and Cayenne are the

capitals. From Cayenne we get Cayenne pepper. French Guiana is used as a colony for prisoners.

Ecuador. Quito, the capital and largest city, is situated nearly on the equator, but because of its high elevation it has a delightful climate. Guayaquil is the principal seaport.

Peru. Lima is the capital and Callao is its port. Pasco is one of the highest cities on the globe. All the cities in Peru and Ecuador suffer from earthquakes.

Bolivia. La Paz is the nominal capital and largest city. Sucre is the real seat of government. Potosi is noted for its silver mines.

Chili. Santiago is the capital. Valparaiso is the chief seaport of South America on the Pacific coast.

Argentine Republic. Buenos Ayres is the capital. It is the largest city in South America. Cordova is a center of trade.

Paraguay. Asuncion is the capital.

Uruguay. Montevideo is the capital.

17. History. South America was discovered by Columbus on his third voyage, near the mouth of the Orinoco river. The following year other Spanish explorers visited the shores, among whom was Amerigo Vespuci after whom the whole country was named. Balboa, a Spaniard, crossed the Isthmus of Darien and first saw the Pacific Ocean. The waters were called Pacific, meaning peaceful, but they are subject to violent storms. In 1520 Magellan passed through the strait that bears his name. He died before he reached home, but his fleet was the first to circumnavigate the globe.

18. Language and Object Lessons. Show what would have been the effect had the Andes been placed on the eastern coast. From that show how important the mountains are in determining the whole vegetable and animal life of the country. Read about the Incas, who were overthrown by Pizarro when he conquered Peru. Compare South America with

North America in respect to shape, size, and population. Describe the Andes and the Plains. Compare the seasons of South and North America. Compare the Indians of Patagonia with those of the United States or the Arctic regions. Compare the forests of Brazil with those of the United States. Name the vegetable productions and describe their uses. Describe the animals in the same way. Notice the adaptations of animals by structure and coverings to their surroundings. Notice the different kinds of food which limit their migrations.

GRADE VII.

To the Teacher. Geography well taught cultivates the imagination and judgment as well as the memory, and trains the powers of observation and language. No other branch in the grammar-school course gives opportunity for culture in so many directions. In no other subject is it so necessary to be independent of the text-book. We must put life and color into the dry facts and give for the memory-lessons only intelligent summaries of the important facts. We, teachers, should tell a pupil nothing that he can find out for himself, but his study should be supplemented by bits of information, descriptions and illustrations. All this is not an easy matter. It demands that the teacher shall be at home in all lands, acquainted with the world's great industries and inventions.

Examine the suggestions for language work given to the previous grades, and continue similar work throughout the year. The gathering of pictures and daily news and placing them on file for future reference is not a small matter, but of vital importance to the interest and success of geography teaching. Progressive map-drawing should form an important part of every recitation. The pupils should be taught to color outline maps, showing the different elevations and

fertility of soil. Give them also outline maps on which to indicate the productions of the different localities. Modeling in sand, clay, putty or plaster of Paris should be practiced as often as possible. Urge the pupils to collect the different productions of the different countries. These should be carefully labeled and kept in a museum for use when needed. The Topics — soil, wind-currents, ocean-currents, climate, animals and occupations should be studied. Each country should be carefully compared with all the others.

I. — EUROPE.

Mould the continent in sand, clay or putty, for the purpose of studying its relief.

1. Position. Its northern boundary lies within the North Frigid Zone. The remainder is within the Temperate Zone. It is the only grand division which nowhere touches the Torrid Zone.

2. Extent. It is the smallest, but one of the grand divisions, being about equal in area to the United States, yet it surpasses all the others in wealth, intelligence and general civilization.

3. Coast. Europe is much indented by large bodies of water so that few parts are more than 300 miles from the coast. These indentations not only provide excellent harbors, but also tend to make the climate milder.

a. *Oceans.* Arctic, Atlantic.

b. *Seas.* White, Baltic, North, Mediterranean, Kara, Adriatic, Aegean or Archipelago, Black, Caspian, Marmora, Azov, Irish. The Caspian Sea is the largest salt lake in the world. On the western shore of this sea is the "Field of Fire." Jets of flame spring from the ground, caused by gases coming out of the earth.

c. *Gulfs.* Finland, Bothnia, Onega, Riga, Lion, Genoa, Taranto.

d. *Bay.* Biscay.

e. *Channels.* Skager Rack, Cattegat, St. George's, English, Dover, Messina, Gibraltar, Bosphorus, Dardanelles.

f. *Islands.* Iceland, British Isles, Candia, Cyprus, Nova Zembla, Sardinia, Corsica, Balearic, Hebrides.

g. *Capes.* North, The Naze, Kanin, Ortegal, Finisterre, St. Vincent, Matapan, Land's End, Clear.

h. *Peninsulas.* Scandinavian, Iberian, Balkan, Italian, Jutland, Crimea.

4. Surface. All of eastern Europe is a low plain, the Valdai Hills being the highest land. Most of this plain is but little above the level of the sea. The western part of Europe is high and mountainous.

a. *Mountain Ranges.* Alps, Vosges, Jura, Cevennes, Appennines, Carpathian, Balkan, Caucasus, Ural, Scandinavian.

b. *Peaks.* Elbrooz, 17,700 feet high, is on the line between Europe and Asia. Mt. Blanc is the highest peak wholly in Europe. Other peaks are Matterhorn, Aetna, Vesuvius, Stromboli. The last three are active volcanoes. Vesuvius had an eruption, more than eighteen hundred years ago, which buried several cities in ashes. Parts of these cities have recently been uncovered and many curious things are found. In many of the houses the tables are set for dinner and bread is found in the ovens. Stromboli is called the "Lighthouse of the Mediterranean," because its glow can be seen at night by the sailors.

c. *Natural Curiosities.* The scenery of Switzerland is the finest in the world. The loftiest peaks of the Alps are always covered with snow, while the valleys are filled with rivers of ice, called glaciers. Far up amid the everlasting snow of these mountains is the Monastery of St. Bernard. This monastery is inhabited by monks, who have trained their dogs to go out during the severe snow storms to rescue lost

travellers. Many lives have thus been saved. Mt. Brocken, the principal peak of the Hartz Mountains, is noted for a strange appearance, called the Spectre of Brocken. At certain times whatever stands on the summit is seen in a much larger form upon the sky. This is simply the shadow thrown upon the sky by the setting sun, but many ignorant people believe that the mountain is haunted. The lake and mountain scenery of all parts of Europe is picturesque and beautiful. Kilhorn peak, in the northern part of Norway, has a large hole through it at about three-fourths of its height, through which the sun shines twice each day in summer. Why in summer? The island of Antiparos is celebrated for its grotto.

5. Lakes. There are two lake-regions in Europe; one in Switzerland, the other in Russia and Sweden. The lakes in Switzerland are noted for their beauty; those in Norway and Sweden for their transparency. Stones can be seen at the depth of 120 feet. Europe has more lakes than any other continent except North America, but they are usually very small. In the northern part there are many lakes with no inlet or outlet, yet they are not salt. Why? Ladoga is the largest lake in Europe.

6. Rivers. The rivers of western Europe rise chiefly in the Alps, and are the Danube, Rhine, Rhone, Seine, Po, Loire, Elbe. The rivers of eastern Europe rise chiefly in the Valdai Hills, and are the Dnieper, Don, Volga, Ural, Dwina, Duna, Petchora. The Volga is the longest river in Europe. It has 70 mouths, and is connected by canals with the White, North and Baltic Seas. The Rhine is remarkable for the old castles upon its banks, built during the feudal ages. What were the feudal ages? Most of the rivers of Europe are connected with one another by canals.

7. Soil. With the exception of the river-valleys, the soil is

not very fertile naturally, but by skilful cultivation it is made very productive.

8. Climate. The climate of southern Europe is mild, that of the north is cold. The winds from the Gulf Stream make the climate of western and northern Europe much warmer than that of the remaining parts. Hammerfest, within the Arctic circle, is only a little colder than New York. Marseilles, France, is in nearly the same latitude as Portland, Maine. Around Marseilles the orange and lemon are cultivated. Where are they cultivated in the United States? Ireland is green and beautiful, while the opposite regions of Labrador are snow-bound and desolate. There are no mountains to break the icy winds of the north, so that the eastern part is much colder than the western. The hot winds from the desert of Sahara, partly cooled by crossing the Mediterranean Sea, render the climate along the sea almost tropical.

9. Animals. In different parts of Europe are found the following: moufflon, elk, reindeer, ibex, chamois, wild boar, lynx, bear, beaver, porcupine, and wolf.

10. Productions. a. *Agricultural.* Europe extends from the Frigid Zone almost to the Torrid Zone and therefore has a great variety of productions. In the far north we can find nothing but mosses and shrubs. In the middle of Europe are immense forests. In the central and southern parts are some of the best vineyards in the world. Along the Mediterranean also we can find tropical fruits.

b. *Mineral.* Europe is not as rich in minerals as North America, yet it produces large quantities of coal, tin, iron, lead, copper, silver and gold.

c. *Manufactured.* The European nations take the lead in manufacturing. The excellent shipping advantages, the numerous rivers furnishing water-power, the cheapness of labor, give them advantages for manufacturing not enjoyed by other

nations. The different manufactures will be mentioned as we study the different nations.

11. Commerce. Europe ranks first in commerce. It imports provisions and raw materials to be used in manufacturing. It exports chiefly manufactured articles.

12. Natural Advantages. What are they? They have already been mentioned.

13. Inhabitants. a. *Race.* The population of Europe is about 350,000,000 and is chiefly of the Aryan race.

b. *Occupation.* In eastern Europe farming is the chief occupation. The farms are small, but cultivated with great skill. Many women work in the fields. In southern Europe fruit-growing is the important industry. Mining and stock-raising are the chief employments in the mountains. In western Europe commerce and manufacturing are the leading pursuits.

14. Political Divisions. Name them. The most powerful and important are Great Britain, Germany, Russia, Austria-Hungary, France, Italy.

15. Cities. The largest cities are London, Paris, Berlin, Vienna, St. Petersburg. These are named according to their size.

16. Language and Object Lessons. Arrange the divisions of Europe in the order of their areas, in the order of their population, in the order of their importance. Compare the people of Europe, North America and South America in respect to their occupation and industries. Compare European nations, the United States and Canada in regard to their standing armies, and education. Describe the ascent of Mt. Blanc, the scenery, etc. Take imaginary journeys to the different parts of Europe from New York. Give object lessons on the productions.

II. — GREAT BRITAIN.

1. Position. Progressive map.

2. Extent. The United Kingdom of Great Britain and Ireland is less than one-half the size of Texas, yet the population is about three-fifths that of the United States. Wales is about the size of Massachusetts.

3. Coast. The coasts are very irregular and the shores generally rocky. On the English channel there are high and chalky cliffs, whose white appearance gave the island the name of Albion, "white," in ancient times.

a. *Ocean.* Atlantic.

b. *Seas.* North, Irish.

c. *Gulfs, Bays.* Nearly all the important rivers have wide mouths resembling bays. Locate Bristol Channel, Cardigan, Solway Firth, Firth of Clyde, Moray Firth, Firth of Tay, Firth of Forth, The Wash, Galway, Donegal.

d. *Channels, Straits.* Dover, English, North, Menai, St. George's.

e. *Capes.* Land's End, Wrath, Malin Head, Erris Head, Mizen Head, Duncansby Head.

f. *Islands.* There are here 5,500 islands but most of them are small and rocky. The Isle of Man contains a population that still use a peculiar language called Manx. The Isle of Wight is called the "Garden of England." West of this island are the Needles and the celebrated "Needle Light-house." Of the Scilly Isles, 145 in number, only six are inhabited. The Channel Islands, consisting of Guernsey, Jersey and Alderney, are noted for their mild climate, picturesque scenery, fruit and cattle. Of the many islands west of Scotland, only 87 are inhabited. The leading occupation of the people is gathering bird's eggs by swinging over the rocky ledges. Locate also Shetland, Orkney, Hebrides, Anglesea, Faroe, Malta.

4. Surface. The northern and western portions of England are mountainous, the remainder rolling. The surface of Scotland is much broken by mountain and valley, and is divided into Highlands and Lowlands. Ireland contains large tracts called bogs. The surface is generally rolling. Wales is mountainous.

a. *Mountain Ranges.* The mountains are not high, but are celebrated for their picturesque scenery. Locate Cairngorm, Grampian, Cambrian, Cheviot.

b. *Peaks.* Snowdon, Ben Lomond, Ben Nevis. The last has a perpendicular precipice of 1500 feet.

c. *Natural Curiosities.* On Staffa island is the celebrated Fingal's Cave. On the coast of Ireland is the Giant's Causeway. It consists of an immense mass of basaltic columns having six sides. They are perpendicular, smooth and regular. There is an Irish legend that it was built by a race of giants to form a road to Scotland. It is 600 feet long. The lakes of Killarney are celebrated for their scenery. Here Sullivan's Cascade falls from a height of 70 feet into the lake with a terrible roar. Here also is the "Devil's Punch-Bowl," a circular lake at the summit of a mountain, from which a stream of water pours down the mountain side. There are many supposed ruins of the temples of the Druids, the priests of the ancient Britons, and also ruins of the Roman occupation and the feudal ages.

5. Lakes. The lakes are small but beautiful. Besides the Lakes of Killarney, locate Loch Lomond, Windermere, and Loch Katrine. This last one is described, in Scott's poem, "The Lady of the Lake."

6. Rivers. All are small, but flow into wide estuaries, Locate Thames, Severn, Mersey, Humber, Clyde, Tweed. Shannon, Great Ouse. There are numerous canals, the most important being the Caledonian.

7. Soil. The soil is fertile, and diligent cultivation has made it very productive. The moist climate of Ireland keeps it so remarkably green that it is called the Emerald Isle.

8. Climate. The climate is mild. The water that surrounds the islands moderates the cold of winter and the heat of summer. Snow seldom remains on the ground more than two or three days. The climate of Wales is colder than that of England.

9. Productions. a. *Agricultural.* Flax and potatoes are the leading crops of Ireland. Wheat, rye, barley and oats also grow here.

b. *Minerals.* The British Isles surpass every other country in the production of salt, iron, coal and tin.

c. *Manufactured.* The English excel in the manufacture of hardware, heavy machinery, railroad iron, cutlery and cotton goods. Great Britain surpasses all other countries in the extent and variety of her manufactures.

10. Commerce. In the extent of her commerce Great Britain excels every other country on the globe. The five principal exports are cotton goods, iron and steel, woolen and linen goods, and coal. The five principal imports are grain, cotton, sugar, wool, wood and timber.

11. Internal improvements. The public roads are among the best in the world. Railroads cross the country in every direction.

12. Inhabitants. a. *Race.* There are three classes of people in Great Britain: the nobility, gentry or middle class, and the working class. The English are robust, fond of domestic life and athletic amusements. The Welsh are industrious and frugal. The Scotch have displayed great genius in history, philosophy and poetry. The Irish are noted for wit, cheerfulness and warmth of heart.

b. *Occupation.* The leading occupations are manufactur-

ing, commerce and mining. Many, of course, are engaged in agriculture.

13. Government. It is a limited hereditary monarchy. The laws are made by Parliament, which consists of a House of Lords and House of Commons. The House of Lords is composed of lords who inherit their seats; the House of Commons is composed of men elected by the people. The highest power is placed in a king or queen. Queen Victoria is the present ruler.

14. Education. The means for education among the poorer classes are not sufficient. The people of Scotland are noted for their superior schools and universities.

15. Foreign Possessions. The principal possessions of Great Britain are as follows: Gibraltar and Malta in Europe; British India, Ceylon, Cyprus, Singapore, Aden and Hong Kong in Asia; Australia, Tasmania and New Zealand in Oceania; Cape Colony, Natal, and the Niger Delta in Africa; Canada, Newfoundland, Jamaica and other West India Islands, British Guiana, British Honduras and the Falkland Islands in America.

16. Chief Characteristics. It is the most powerful and populous empire in the world. It ranks first in commerce and naval power.

17. Cities. London is the capital of the British Empire and the largest and wealthiest city in the world. It contains many elegant public and private buildings. The atmosphere is often dimmed with smoke, and in winter the smoke and fog together make it necessary sometimes to light the street-lamps in the day-time, and even then it is impossible at times to find one's way around.

Glasgow, the next city in size, is situated in the midst of coal and iron mines, and is noted for its manufactures.

Liverpool is an important seaport, whose commerce is

almost equal to all the other seaports together. Manchester is the first city in the world in the manufacture of cotton goods. Birmingham is noted for its hardware manufactories. Dublin is the capital and largest city of Ireland, noted for its silk manufactures. Leeds is noted for its woolen goods; Sheffield for its cutlery. Edinburgh, the capital of Scotland, is a great center of learning and education. Bristol, Portsmouth and Hull are leading seaports. Belfast and Dundee are noted for their linen. Oxford and Cambridge are the seats of old and renowned universities. Nottingham is celebrated for its laces; Newcastle for its coal; Paisley for its manufacture of shawls and carpets. Cardiff is the seaport and largest city of Wales. Merthyr Tydfil is noted for its iron-works.

18. Language and Object Lessons. In stories and travels visit the different parts of the British Isles. Compare its cities and scenery with those of the United States. Weave into stories the simplest points of English history. Sir Walter Scott's "Lady of the Lake" could be profitably read and studied here. In what respect is the Thames a greater river than the Amazon? Read about Guy Fawkes, bird-catching on the islands, etc.

III. — NORWAY AND SWEDEN, or Scandinavian Peninsula.

1. Position. It is the most northerly division of Europe.

2. Extent. It is a little larger than the New England and Middle Atlantic States.

3. Coast. The coast is bold and rocky, with many indentations.

a. *Oceans.* Arctic, Atlantic.

b. *Seas.* North, Baltic.

c. *Gulf.* Bothnia.

d. *Channels.* Skager Rack, Cattegat.

e. *Capes.* North, The Naze.

f. *Islands.* Gothland, Loffoden.

4. Surface. The greater part of Norway consists of a high and rocky plateau. Sweden is a level country with many small lakes and rivers.

a. *Mountain Ranges.* Kiolen, Dovrefield.

b. *Curiosities.* There are numerous rivers, all of which have beautiful cataracts, varying in height from 100 to 1,000 feet. The Maelstrom is a famous whirlpool in the southern part of the Loffoden islands. Most of the time vessels can sail across it, but when the wind and tide are opposed to each other, the water is lashed into violent fury. It is then dangerous for ships to approach it. Kilhorn Peak has been described.

5. Lakes. Nearly one-eighth of the surface is covered by lakes. Wener is the largest and third in size in Europe.

6. Rivers. These are too numerous to mention. Most of them flow through deep ravines, probably worn by glaciers.

7. Soil. The greater part is fertile, but not productive.

8. Climate. The climate of the western coast is kept mild by the Gulf Stream, so that the harbor at Hammerfest is seldom frozen. The eastern coast has very cold winters.

9. Productions. a. *Agricultural.* Barley, rye and oats grow in the southern part.

b. *Mineral.* There are rich mines of copper, iron and lead. Large quantities of building-stones are exported.

10. Inhabitants. a. *Race.* The people are noted for their intelligence, industry and independence.

b. *Occupations.* Norway takes the lead of all countries in fishing. Cattle-raising is an important industry.

11. Government. The government is a limited monarchy. Norway and Sweden have one king, but separate legislative bodies.

12. Cities. Stockholm is the capital of Sweden. It is built on a group of islands, and is called the Northern Venice. Christiania is the capital of Norway, and noted for its university. Göttenburg is an important seaport, and largely engaged in manufacturing. Bergen is the center of the fishing industry. Hammerfest is the most northern town in the world. It is situated within the Arctic Circle, but the heat in summer is often oppressive. The sun is not out of sight from the middle of May to the end of July.

13. Language Lessons. Same as usual.

IV.— RUSSIA.

1. Position. Extent. The empire of Russia includes nearly all the northern and eastern part of Europe, and all the northern part of Asia. It includes about one-seventh of the land-surface of the globe. Of the three great empires of the world, Russia is second in area and third in population. The British Empire is first in area and second in population. The Chinese Empire is first in population and third in area.

2. Coast. a. *Ocean.* Arctic.

b. *Seas.* White, Kara, Baltic, Black, Azov, Caspian.

c. *Gulfs.* Bothnia, Finland, Riga, Onega.

d. *Peninsulas.* Kani-, Crimea.

e. *Islands.* Spitzbergen, Nova Zembla. These islands are cold, barren and uninhabited. They are visited in summer for the taking of whales, etc.

3. Surface. The Valdai Hills are the highest lands in Russia. The larger part is a succession of vast plains called steppes. Much of the area is covered with forests. Large tracts of land in Russia are below the sea-level.

a. *Mountain Ranges.* The Ural and Caucasus Mountains form the natural boundary between Russia and Asia.

4. Lakes. There are many lakes in the north-western part,

but they are usually small. Ladoga is the largest lake in Europe. Onega is next in size. Locate also Peipus.

5. Rivers. The largest rivers of Europe are in Russia. The Volga is the largest. Other rivers are: Dnieper, Ural, Don, Petchora, Duna, Dniester.

6. Soil. The most fertile part of Russia extends from the Valdai Hills south and from the Volga river west.

7. Climate. The climate is subject to great extremes. In the north the winters last for three-fourths of the year.

8. Productions. a. *Agricultural.* The forests which cover all of Central Russia furnish much valuable timber. Large quantities of grain also are exported, chiefly wheat.

b. *Mineral.* Gold, platinum and copper are found in the Ural Mountains. Coal, iron and petroleum are found near the Caspian Sea.

c. *Manufactured.* The chief manufactures are woolen, linen, leather and fur goods.

9. Commerce. The trade is chiefly with Great Britain and Germany. The commerce is carried on by means of canals, rivers and caravans. All the lakes and rivers are united by canals, so that the Baltic and White Seas are united with the Caspian and Black. Camels are kept by the wandering tribes of the steppes, and much of the trade between European and Asiatic Russia is carried on by caravans. Most of the inland trade is carried on by means of annual fairs. The most noted one is that of Novgorod, where property to the value of $10,000,000 is exchanged.

10. Inhabitants. The people of the Russian Empire are of a cheerful temperament and fond of frolic. Some of the wandering tribes within the empire are only half-civilized.

11. Government. It is an absolute monarchy. The Czar is the supreme ruler. The people have no voice in making or executing the laws. The standing army is the largest in the world.

12. Cities. St. Petersburg is the capital and largest city. Only small vessels can ascend the river to the city. It is built on small islands as well as on the bank of the river, and is sometimes inundated. Moscow was formerly the capital of Russia and contains the winter residence of the Czar. Here also the Czar is crowned. Within the Kremlin is a cathedral which contains the largest bell in the world. Warsaw was the capital of Poland. It is renowned for its fairs and manufactures. Odessa is the chief southern seaport. Astrakhan is a seaport on the Caspian Sea. Riga is the commercial city on the Baltic. Novgorod has a usual population of 17,000 but during its annual fair there are over 300,000 persons in the city. Kronstadt commands the entrance to St. Petersburg, and is one of the strongest fortified cities on the globe. Kharkov is noted for its cotton and wool fairs.

13. Language and Object Lessons. Continue imaginary journeys for the purpose of describing the scenery of the country and the habits of the people. Study the physical features of the country in order to understand the cause of the climate and soil. Give a little idea of what a despotic government can do by relating incidents gleaned from such articles as Kennan's "Siberia." Describe the people of Lapland; short of stature, not very clean, using the reindeer for food, for clothing and as a beast of burden. For what is the peninsula of Crimea noted? Who are Nihilists?

V. — FRANCE.

1. Position. Boundaries. Progressive map.

2. Extent. It is a little larger than the Middle Atlantic States.

3. Coast. The shores along the Atlantic are formed of sandy cliffs, but on the Mediterranean coast are some good harbors.

a. *Ocean.* Atlantic.

b. *Sea.* Mediterranean.

c. *Gulf, Bay.* Lion, Biscay.

d. *Channel, Strait.* English, Dover.

e. *Cape.* St. Matthew.

f. *Islands.* Corsica belongs to France and is celebrated as the birthplace of Napoleon Bonaparte. Who was he?

4. Surface. The surface is generally level, most of the mountains being on the boundaries.

a. *Mountain Ranges.* Pyrenees, Alps, Jura, Vosges, Cevennes.

b. *Peaks.* Cenis, Blanc.

c. *Curiosities.* There are several tunnels through the Alps, the best known being Mt. Cenis, seven miles long. Mt. Blanc is visited yearly by thousands of tourists. At Vichy are the celebrated mineral springs. Among other peculiar qualities, the water from the springs will petrify anything placed in it.

5. Rivers. Rhone, Loire, Seine, Garonne or Gironde, Meuse. All of these rivers flow through very fertile valleys. The valley of the Loire is called the "Garden of France." The Meuse disappears underground and reappears again after four miles. Most of the rivers are connected by canals.

6. There are some barren tracts, but most of the land is very fertile.

7. Climate. The climate is so delightful, that France is called "sunny France."

8. Productions. a. *Agricultural.* Apples, pears, plums, grain and potatoes are the products of the north. Peaches, figs, olives, oranges, grapes and pomegranates grow in the south. Nowhere in the world is the grape cultivated so extensively and successfully as here. Here also the mulberry tree is cultivated. On its leaves the silk-worm feeds. When the worm is grown it winds itself in a cocoon. These are

dipped into hot water to kill the worm and soften the silk. The threads of five cocoons are joined into one strand. The silk is then ready to be woven into cloth.

b. *Mineral.* There are some minerals, but France is especially noted for its building stones, as marble, granite, porphyry, etc.

c. *Manufactured.* The French excel in the manufacture of silks, wines, perfumery, porcelain and all articles that require taste, ingenuity and skill.

9. Commerce. France ranks next to Great Britain in commerce. The exports are manufactured silk and wool, flour, wines and leather. The imports are raw silk, wool, cotton, hides.

10. Inhabitants. a. *Race.* The French, especially at Paris, are noted for their delicacy, refinement and military courage. Gayety, intelligence and politeness are common to all.

b. *Occupation.* About one-half are engaged in agriculture and one-fourth in manufacturing

11. Education. Since France has been a republic more attention has been paid to education.

12. Government. France is a republic. The president is elected for seven years.

13. Foreign Possessions. France owns Algeria, Tunis and other African possessions; Farther India, Guadaloupe, Martinique, French Guiana and some of the West Indies.

14. Cities. Paris is the capital. It is next to London in size. It is the queen of the fashionable world and noted for its magnificent palaces, boulevards, public gardens and places of amusement. The buildings are usually made from stone obtained from quarries beneath the city. Lyons is noted for its silk manufactures, which are the most extensive in the world. Marseilles has one of the best harbors in Europe.

Bordeaux is situated in the vine-growing region and is noted for its wine. Lille and Toulouse have large linen and cotton manufactories. Havre is a seaport; Brest and Toulon are naval stations. Rheims, Orleans, and Tours are places of historic interest. Calais is a fortified seaport opposite Dover. A tunnel under the strait connecting the two places is now being built. Versailles is an important suburb of Paris. St. Etienne owes its prosperity to its coal-fields. Rouen, an important manufacturing city, is the birthplace of La Salle. Who was he? The republic of Andorra is situated on the south side of the Pyrenees. It is called independent, but pays a small sum of money to Spain every year.

15. Language Lessons. Describe Mt. Blanc, the scenery, ruins, etc., throughout France. Compare France with Great Britain, Russia, the United States, Brazil, Mexico. History, manners and customs should be taught in language lessons. Call the attention of the class to the meaning of words. The children will be interested in knowing the meaning of names, especially if there is any incident connected with them.

VI. — SPAIN.

1. Position. Boundaries. Progressive map. Spain and Portugal occupy the Iberian Peninsula in the south-western part of Europe.

2. Extent. Spain is a little larger than the Middle Atlantic States.

3. Coast. a. *Ocean.* Atlantic.

b. *Sea.* Mediterranean.

c. *Bay.* Biscay.

d. *Strait.* Gibraltar.

e. *Capes.* Ortegal, Finisterre, De Palos, Trafalgar, now called Tarifa.

f. *Islands.* The Balearic islands belong to Spain. The

largest ones are called Majorca and Minorca. They produce oranges, olives, etc.

4. Surface. The surface is more diversified than that of any other country in Europe.

a. *Mountain Ranges.* The important ones are Pyrenees, Cantabrian, Sierra Nevada. The Pyrenees are so high as to be continually covered with snow.

b. *Natural Curiosities.* Throughout Spain there are many objects of great beauty. The scenery in the Pyrenees is remarkably grand. Here is a cataract over 1,300 feet high.

5. Rivers. Few of the rivers are navigable beyond tide-water. The rivers are the Tagus, Ebro, Guadalquivir.

6. Soil. Except on the mountain ridges the soil is very fertile. It is particularly favorable for fruit-culture.

7. Climate. It is never very cold, even in the northern part, while in the southern part it seems always like spring. It is claimed in Seville that there is never a day during some part of which the sun does not shine.

8. Productions. a. *Agricultural.* The mountains are covered with valuable timber, the most important of which is the cork-oak. Spain supplies nearly all the cork that is used in Europe and America. The southern part looks like a garden in perpetual bloom. Here we find the grape, date, orange, banana, fig, citron, prune and almond.

b. *Mineral.* Spain is the first country in the world in the production of lead. The quicksilver mines of Almaden were once the richest in the world. Iron and copper are also found.

c. *Manufactured.* Saltpetre, gunpowder, tobacco, porcelain and silk are the chief manufactures. There are some woolen manufactures, for the wool from the merino sheep is of excellent quality.

9. Commerce. Wine, fruits, cork and olive-oil are the principal exports.

10. Inhabitants. There is a great difference of character among the inhabitants of the different provinces. In general the Spaniards are temperate and honest. Dancing and bull-fighting are favorite amusements.

Occupation. Agriculture is the leading occupation. Many are engaged in sardine-fishing.

11. Foreign Possessions. Spain owns the following islands: Cuba, Porto Rico, Canary, Balearic, Philippine and a few other small ones.

12. Cities. Madrid is the capital and largest city. It has one of the largest art galleries in Europe. Cadiz is the oldest city in Europe. Barcelona and Valencia are seaports and noted for their manufactures of silk. Granada is noted for the Alhambra, a palace once occupied by Moorish monarchs. Seville contains a magnificent cathedral. Malaga is famous for its grapes, raisins and wine. Gibraltar is an immense rock fourteen hundred feet high and commands the entrance to the Mediterranean. It is considered the strongest fortification in the world. Palos is the small seaport from which Columbus sailed when he discovered America.

13. History. Four hundred years ago Spain and Portugal were the foremost countries of Europe. The discovery of America by Columbus was due to Spanish enterprise. The Spaniards gained a firm hold in the New World, and the whole of South America except Guiana is held by the descendants of Spaniards and Portugese.

14. Language and Object Lessons. Compare Spain with the different countries of Europe and the different groups of states in the United States. What states in the United States are in the same latitude as Spain? How is quicksilver obtained? Describe the Alhambra or any other important place in Spain. Compare the state of agriculture there with that of the United States.

VII. — PORTUGAL.

1. Position. Boundaries. Progressive map.

2. Extent. It is about the size of Maine.

3. Coast. The coast is usually low and marshy.

Ocean. Atlantic.

4. Surface. It is similar to that of Spain, generally mountainous.

Mountain Ranges. Sierra Estrella.

5. Rivers. Tagus, Douro, Guadiana.

6. Soil. The soil is very rich.

7. Climate. The climate is mild and healthful. Hurricanes and earthquakes are frequent.

8. Productions. a. *Agricultural.* These are similar to those of Spain. Here are also large groves of mulberry trees.

b. *Mineral.* In Portugal are found the stones used in lithographic printing.

c. *Manufactured.* The chief article manufactured and exported is port-wine.

9. Inhabitants. The Portuguese are of the same descent as the Spaniards, but have a distinct language. They are fond of music, bright colors and dancing.

10. Government. The government is a hereditary constitutional monarchy.

11. Foreign Possessions. Portugal owns Cape Verde and extensive possessions on the coast of Africa.

12. Cities. Lisbon is the capital and largest city. From a distance it appears like a beautiful city, but in reality the streets are narrow and filthy and the houses gloomy. It was once destroyed by an earthquake, when sixty thousand persons perished. Oporto is the center of the trade in fruit and port-wine.

13. Language and Object Lessons. Take imaginary jour-

neys from Lisbon to four or five of the largest cities in Europe, South America and the United States. Give object lessons on productions. Comparisons, etc.

VIII. — BELGIUM.

1. Position. Boundaries.

2. Extent. It is next to the smallest independent kingdom in Europe, being a little larger than Massachusetts.

3. Coast. There are several good harbors.

4. Surface. The coasts are flat, requiring dikes to protect them from the sea. The south-eastern part is mountainous.

5. Rivers. The Scheldt is a navigable river. There are four hundred miles of canals.

6. Soil. Nearly all of Belgium is fertile and cultivated like a garden.

7. Productions. a. *Agricultural.* The common grains and vegetables are raised.

b. *Mineral.* It produces more coal than any other country in Europe except England. It is also rich in iron, zinc, lead, and manganese.

c. *Manufactured.* Its carpets, linens, and laces are known all over the world.

8. Inhabitants. The Belgians are distinguished for honesty and independence. Part of the people speak Flemish, but the educated people speak the French language.

9. Government. Belgium is a kingdom.

10. Cities. Brussels is the capital and celebrated for its carpet and lace manufactures. Antwerp is the chief seaport and contains large sugar-refineries. Ghent is celebrated for its cotton manufactories and for the treaty of peace made there in 1814 between Great Britain and the United States. Liege is an important railway center. Waterloo is celebrated for the great battle between Napoleon and the Duke of Wellington.

11. Language Lessons. Describe the manufacture of carpets and lace. The flax used in the manufacture of the lace costs from $60 to $80 a pound, and a yard of the lace is worth from $25 to $50. The spinners work in darkened rooms, which must have a uniform temperature and moisture.

IX. — THE NETHERLANDS.

1. Position. Boundaries.

2. Extent. It is about equal in size to Massachusetts and Connecticut.

3. Surface. Nearly one-third of the whole area lies below the sea level. A part of the coast is protected by natural sand bars; in other parts the sea is kept out by dikes, from twenty to sixty feet high. The rivers are also kept in their channels by dikes. Efforts are now being made to drain the Zuyder Zee and thus add more area to Holland.

4. Rivers. The Rhine is the only important river.

5. Climate. The climate is very moist.

6. Productions. a. *Agricultural.* The country is best adapted to grazing, and its main source of wealth is in its dairy products.

b. *Manufactured.* Linen and paper hold the first rank. Butter and cheese are manufactured in great quantities. An absence of coal and water-power oblige the people to use windmills for power.

7. Inhabitants. The Hollanders are distinguished for frugality, neatness and industry. They speak a language called Dutch.

8. Government. It is a constitutional monarchy.

9. Foreign Possessions. Dutch Guiana, several small islands of the West Indies and many islands of the East Indies belong to The Netherlands.

10. Cities. The Hague is the capital. It means a wood

or grove. It contains one of the best libraries in Europe. Amsterdam is the largest city, renowned for its educational institutions. In the center of every street is a canal. The diamond-cutting establishments of Amsterdam have long been the most famous in the world. Rotterdam is the commercial city, and built like Amsterdam with canals in every street. Leyden is the place from which the Puritans sailed when they came to Massachusetts. The Grand Duchy of Luxemburg, formerly a state in Germany, is an independent power. The King of Netherlands is the ruler; Luxemburg is the capital.

11. Language Lessons. For reproduction use the many quaint and curious stories about Holland, her people, canals, windmills, etc. Teach the meaning of "Holland," "Netherlands," "dam."

X. — DENMARK.

1. Position. Boundaries. Progressive map.

2. Extent. About the same size as the Netherlands.

3. Coast. The coast is low and sandy, and on account of its sand-bars it is considered dangerous on the western coast.

a. *Seas.* North, Baltic.

b. *Straits.* Skager Rack, Cattegat.

c. *Islands.* Zealand is the largest and most important. Funen and Laaland are also important.

4. Surface. The surface is low and flat and in some places dikes are needed as in Holland.

5. Soil. The soil is fertile and suitable for grain, so that Denmark is one of the principal grain-growing regions in Europe.

6. Climate. It is similar to that of Holland.

7. Productions. a. *Agricultural.* Grain, fruit, cheese, butter and cattle are the chief products.

b. *Mineral.* There are none. The people burn turf and peat in place of coal.

c. *Manufactured.* These are few. Why?

8. Inhabitants. The Danes are now and always have been bold and hardy seamen.

9. Government. It is a constitutional monarchy. The ruler is called a king. A man must be thirty years old before he can vote. How old must he be in the United States?

10. Foreign Possessions. These include Iceland, Greenland and a few islands of the West Indies.

11. Cities. Copenhagen, "Merchant's Haven," is the capital and largest city. It is one of the finest cities in Europe and noted for its universities, scientific schools, art-galleries and museums.

12. Language and Object Lessons. Same as usual.

XI. — GERMANY.

1. Position. Boundaries. Progressive map.

2. Extent. It is about equal to the New England and Middle Atlantic States.

3. Coast. It is generally low and marshy. The harbors are usually mouths of rivers.

a. *Seas.* North, Baltic.

b. *Gulfs.* Lubeck, Dantzic.

4. Surface. The northern part is generally flat, including large marshes. The southern part is mountainous.

a. *Mountain Ranges.* Hartz, Vosges, Böhmer-Wald, and the Black Forest Range.

b. *Natural Curiosities.* In the Hartz Mountains is the scene of the "Specter of Brocken," which has already been described. Throughout Germany are many ruins and caves.

5. Lakes. There are only a few small lakes in the mountains.

6. Rivers. The Rhine and Danube are connected by a canal. The rivers are: Rhine, Weser, Elbe, Oder, Vistula, Danube.

7. Soil. The soil is fertile; the valley of the Rhine being very productive.

8. Climate. The climate is variable but mild and healthy. In southern Germany the winters are so mild that the snow remains on the ground only a few days.

9. Productions. a. *Agricultural.* All kinds of grain and fruit belonging to the temperate regions are produced in large quantities. The vineyards of the Rhine are famous.

b. *Mineral.* Amber is found on the shores of the Baltic. Germany ranks first in the production of zinc. The mineral springs are numerous and celebrated. Silver, coal, iron and lead are found among the minerals.

c. *Manufactured.* Germany is one of the greatest manufacturing countries in the world. It excels in heavy iron-ware, steel, astronomical and optical instruments. The other manufactures are cotton, woolen and silk goods.

10. Inhabitants. The Germans are noted for their thrift, industry, intelligence and love of music. Germany has one of the finest school-systems in the world. Education is compulsory. There are twenty-one universities, some of which are celebrated all over the world.

11. Government. The government is a constitutional monarchy. The ruler is called the Emperor. Germany is divided into four kingdoms, — Prussia, Saxony, Bavaria, Wurtemberg; six grand-duchies, five duchies, seven principalities, three free cities, — Lubeck, Bremen, Hamburg; and the territory of Alsace-Lorraine. The most powerful of all the states is the kingdom of Prussia. The King of Prussia is the Emperor of Germany. Baden, the first of the duchies, is noted for its mineral springs, its vineyards, and its Black Forests. The territory of Alsace-Lorraine was wrested from the French at the close of the Franco-Prussian war in 1871. The government of Germany is noted for its large and well-disciplined army.

12. Foreign Possessions. These include Bismarck Archipelago, a part of New Guinea, and extensive sections in Africa.

13. Cities. Berlin is the capital and largest city and noted for its universities. It is the third city in size in Europe. Hamburg is the greatest commercial city on the continent of Europe. Munich and Dresden are noted for their universities and art-galleries. Leipsic publishes more books than any other city in the world unless it is New York. Other important cities, each of which have over 100,000 population, are Breslau, Königsberg, Cologne, Frankfort-on-the-Main, Stuttgart, Hanover, Bremen, Dantzic, Magdeburg, Strasburg, Dusseldorf, Nuremberg, Elberfeld, Altona, Barmen and Stettin.

14. Language and Object Lessons. Continue journeys, descriptions, pictures, comparisons as usual. Teach any important fact even if not mentioned in the topics, such as the following: Germany is noted for its fine wool. Here is prepared the fine wool used in fancy work.

XII. — SWITZERLAND.

1. Position. Boundaries.

2. Extent. It is about the size of Massachusetts and Connecticut.

3. Surface. Switzerland is crossed by the Jura Mountains and Bernese Alps. The highest peaks are covered with perpetual snow, furnishing many glaciers and cascades.

a. *Peaks.* Blanc and Rosa are the highest peaks. Gothard is celebrated for its tunnel, over nine miles long. The Matterhorn and Jungfrau are favorite resorts for Alpine clubs.

b. *Natural Curiosities.* Switzerland is famed for her beautiful scenery, and is visited by thousands of pleasure-

seekers every year. The falls of Staubach are over nine hundred feet high. In the valleys of the Bernese Alps are large glaciers, which are the sources of rivers, as the Rhine and Rhone.

4. Lakes. Switzerland is noted for her numerous and beautiful lakes. The principal ones are Geneva, Lucerne, Constance, Zurich. These lakes are seldom frozen over in winter, and in summer are delightful spots.

5. Rivers. The Rhine and the Rhone rise in Switzerland. The Rhine flows through Lake Constance, and the Rhone through Lake Geneva.

6. Soil. About one-third of the surface is above the limit of perpetual snow. The remainder is valuable as pasture land.

7. Climate. The climate is temperate in the plains and hot in the valleys.

8. Productions. a. *Agricultural.* There is not sufficient grain raised for the population, as most of the people are engaged in cattle-raising.

b. *Mineral.* Some iron and coal are found.

c. *Manufactured.* These are famous all over the world for their excellence. They include, besides dairy products, watches, jewelry, music-boxes and carved works.

9. Inhabitants. The Swiss are noted for their spirit of independence.

10. Government. Switzerland is a republic, composed of twenty-two cantons. The president is elected for one year.

11. Cities. Berne is the capital. Geneva is the largest city and noted for its manufacture of watches and jewelry. Basle is the educational center. Zurich is also noted.

12. Language and Object Lessons. Describe the scenery. including avalanches, glaciers, etc. Read stories about William Tell, about the monks and dogs of St. Bernard.

XIII. — ITALY.

1. Position. Boundaries. Progressive map.

2. Extent. It is about the size of the Middle Atlantic States.

3. Coast. The peninsula, which represents a boot in form, is enclosed by the Mediterranean and its branches. The eastern shore is generally flat.

a. *Seas.* Mediterranean, Adriatic.

b. *Gulfs, Bays.* Genoa, Naples, Taranto, Venice.

c. *Straits.* Otranto, Messina.

d. *Islands.* Sardinia, Sicily, Elba, Lipari. Elba is celebrated for being the island to which Napoleon was first exiled. The Lipari Islands contain the volcano Stromboli already described.

4. Surface. The Apennines, called the backbone of Italy, extend the whole length. The Alps form a natural boundary between Italy and France. The harbors along the western shore are remarkable for their beauty. Genoa and Naples are particularly noted.

a. *Volcanoes.* Etna, Vesuvius.

b. *Natural Curiosities.* All the valleys and lakes abound in beautiful scenery. The ruins of its cities and public works are of great interest and worth studying. The Blue Grotto of Capri is on an island in the bay of Naples. It can be entered only by a canoe, through an arch about a yard high. The Grotto is about forty feet high and the walls and roof are of a beautiful color. Near Naples is a cave, the floor of which is covered with carbonic acid gas, a deadly poison to anyone entering it. The Leaning Tower of Pisa is 179 feet high, and leans thirteen feet from the perpendicular.

5. Lakes. The lakes are small, numerous, and picturesque. Como is the most celebrated. Many of them are craters of extinct volcanoes, now filled with water.

6. Rivers. The Po, Tiber, and Arno are the largest.

7. Soil. The valley of the Po is one of the most fertile regions in the world.

8. Climate. Owing to the great number of clear days, the country is called Sunny Italy. The climate is milder than in the eastern and central parts of the United States.

9. Productions. a. *Agricultural.* Northern Italy and Sicily are important grain-growing regions. The delta of the Po furnishes important rice-fields. In Southern Italy the vine and olive-tree yield the principal crops.

b. *Mineral.* Marble is found in large quantities. Sulphur is obtained from the craters of the volcanoes.

c. *Manufactured.* Italy ranks as one of the foremost countries in the production and manufacture of silk. The Italians are noted for the manufacture of porcelain, statuary, parchment, and artificial flowers.

10. Inhabitants. The people are either very rich or very poor; the majority belong to the latter class. The Italians are full of genius, and endowed with a talent for music and fine arts. They have distinguished themselves in painting, music, and sculpture.

b. *Occupation.* Agriculture is the leading pursuit, yet not more than two-thirds of the land is cultivated.

11. Government. It is a constitutional monarchy.

12. Cities. Rome is the capital. It was the seat of the ancient Roman Empire, and is in many respects the most celebrated spot on the globe. It contains the church of St. Peter, the largest church in the world. Naples is the largest city in Italy. Near Naples are the ruins of Herculaneum and Pompeii, and the volcano Vesuvius. Milan is famed for its magnificent cathedral of pure-white marble. It is the center of the grain-trade. Genoa is celebrated as the birthplace of Columbus. It is the seaport of northern Italy. Florence is

noted for its rich collections of paintings and statues. Venice is the chief commercial city on the Adriatic. It is built on seventy islands connected by more than five hundred bridges, the most noted of which is called the Rialto. Canals are used in place of streets, and gondolas in place of carriages, because the streets are so narrow. Palermo is an important commercial city noted for its shipbuilding. Other large cities are Messina, Bologna, Leghorn, Catania and Pisa. San Marino is a Republic. It is the smallest and one of the oldest of the European States.

13. Language and Object Lessons. Read for reproduction nice descriptions of the scenery, the cities, the people, and the natural wonders. Comparisons, journeys, pictures, object lessons, etc., as usual.

XIV. — AUSTRIA-HUNGARY.

1. Position. Boundaries. Progressive map.

2. Extent. It is next to the largest political division of Europe, being about equal to Texas in size.

3. Coast. Its only sea-coast is on the Adriatic Sea, and Trieste is the only important seaport.

4. Surface. The surface is mountainous.

a. *Mountain Ranges.* Tyrolese-Alps, Carpathian, Erz, Böhmerwald.

b. *Natural Curiosities.* In the Danube are some rapids, known as the "Iron Gates." Lake Cirknitzer is a curiosity. During a part of the year fishing is carried on in it, and during the other part, the water having disappeared through an opening in the bottom, the land is cultivated. The cave of Adelsberg is renowned. It contains halls, grottoes and abysses several hundred feet deep.

5. Rivers. The Danube with its tributaries drains Austria. The Theiss and Drave are the largest of its tributaries.

6. Soil. The soil is fertile and well cultivated.

7. Climate. The climate is temperate and healthful.

8. Productions. a. *Agricultural.* The treeless plain of Hungary is one of the chief wheat-producing regions in the world. Its vineyards, also, produce more grapes and wine than any other country in Europe. The common fruits and grains of the temperate zone are found throughout Austria.

b. *Minerals.* The coal-fields are inexhaustible. The salt and quicksilver mines are large and productive. The salt-mines are eight hundred feet in depth. Within them are two large chapels with altars and statues carved in pure salt.

c. *Manufactured.* Fine wood carving is carried to perfection in Tyrol. The glass-ware of Bohemia and the musical instruments of Vienna are celebrated.

9. Inhabitants. There are many different nationalities, and accordingly many different languages.

10. Government. Austria is a constitutional monarchy. The Austrian Empire consists of the Archduchy of Austria and the Kingdom of Hungary, together with several provinces. The Emperor of Austria is the King of Hungary.

11. Cities. Vienna is the capital and largest city. It is the chief manufacturing city of the empire. It contains a very large library. In the museum and treasury is the largest collection of jewels and plate in Europe. Buda and Pesth, situated on opposite banks of the Danube, are connected by a suspension bridge, thus forming one city, which is the chief commercial city of Hungary. Prague is the capital of Bohemia.

12. Language and Object Lessons. Describe the mines, mineral-springs, manufactures and productions in language lessons.

XV.—TURKEY.

1. Position. Boundaries.

2. Extent. It is about one-half the size of Texas.

3. Coast. a. *Seas.* Adriatic, Ægean, Marmora, Black. The waters of the Mediterranean are about three times as salt as those of the ocean. The waters of the Black Sea are about one-half as salt as the ocean. What causes the difference? Marmora derives its name from a small island in it which is celebrated for its marble-quarries.

b. *Gulf.* Salonica.

c. *Straits.* Otranto, Dardanelles, Bosporus. Dardanelles in ancient times was called Hellespont, named from Helle, who was drowned there while running away with the "Golden Fleece." Bosporus means literally the "ox-ford." (Explain these myths in language lessons.) That part of the Bosporus on which the city of Constantinople stands is called the "Golden Horn."

d. *Islands.* Candia, formerly called Crete, belongs to Turkey. It is noted for the "Labyrinth of Crete," the residence of the fabled "Minotaur." Another myth for language lessons.

4. Surface. The country is a region of hills, valleys, mountains, and table-lands.

a. *Mountain Ranges.* Balkan, Pindus.

b. *Peaks.* Olympus, which means "abode of the gods." (Another myth for language lesson.)

5. River. The principal one is the Danube.

6. Soil. The soil is fertile, but poorly cultivated.

7. Climate. The climate at the north is cold, but south of the Balkan Mountains it is mild.

8. Productions. a. *Agricultural.* The northern part is covered with forests of fir. In the southern part we find the olive, the vine, rice and cotton. The southern slope of the

Balkan is remarkable for the fields of roses from which attar of roses is made.

b. *Manufactured.* The most noted manufactures are rich carpets, embroideries, silk and fine leather.

9. Animals. The bear, wolf and wild-boar are found in the forests. Among the domestic animals are the sheep and cashmere-goats. From the hair of the goats the famous cashmere shawls are made; while the skins are made into Turkey morocco.

10. Inhabitants. About one-third of the inhabitants are Turks; the remainder are of different nationalities. The Turks are ignorant, fanatical, and treacherous.

11. Government. It is a despotism. The Emperor has absolute power over all the Turkish or Ottoman Empire. This includes Asiatic Turkey, which is about twice as large as Turkey in Europe; it includes also Arabia and Egypt.

12. Cities. Constantinople, "the city of Constantine," has a beautiful harbor, called the "Golden Horn." The situation is beautiful, but the streets are crooked and filthy, and the houses gloomy. Adrianople has a fine Moslem temple. What is meant by Moslem? Salonica is an important seaport.

13. Language and Object Lessons. Besides the celebrated myths already mentioned, continue all lessons as usual.

XVI. — ROUMANIA, SERVIA, MONTENEGRO, BULGARIA.

These were parts of the Turkish Empire until 1878, when by the Treaty of Berlin the first three became independent states, and Bulgaria a self-governing but tributary state. Bucharest, Belgrade, Cettigne, Sophia are the capitals.

XVII. — GREECE.

1. Position. Boundaries.

2. Extent. It is about two-thirds the size of Maine, yet at one time it was one of the wealthiest and most powerful countries in the world.

3. Coast. It is very irregular, being almost divided by the Gulf of Liponto.

a. *Seas.* Mediterranean, Ionian, Ægean.

b. *Cape.* Matapan.

c. *Islands.* There are many small islands in the Ionian and Ægean seas, belonging to Greece.

d. *Isthmus.* Corinth.

4. Surface. The surface is similar to that of Turkey, and is crossed by the Pindus Mountains.

a. *Natural Curiosities.* Greece is celebrated for its clear atmosphere, and for the beauty of its scenery. Its mountains were at one time considered to be the home of the gods; its forests and rivers the homes of nymphs and fairies. It was the center of all the art and poetry in the world.

5. Soil, Climate. The soil is generally fertile, and the climate temperate and healthful.

6. Productions. a. *Agricultural.* Only a small part of the land is cultivated. The productions include figs, olives, grapes, melons, dates, citrons, currants and pomegranates. The currants are small dried grapes, called currants because first grown in Corinth.

b. *Mineral.* Greece is noted for its fine marbles, verd-antique, and jasper.

7. Commerce. Its commerce is extensive, and is the leading pursuit of the people.

8. Inhabitants. The Greeks are vain, passionate, but patriotic. The Greek of to-day is inferior to the Greek of ancient times.

9. Government. Greece is a constitutional monarchy or kingdom. Greece was once under the dominion of Turkey. Now its independence has been guaranteed by England, France, and Russia, who promise to assist it, if necessary, against Turkey.

10. Cities. Athens is the capital, and is one of the most interesting cities in the world. Corinth and Thebes were once celebrated and powerful, but are now only small towns. Patras, the second city in size, is the chief commercial center.

11. Language and and Object Lessons. Describe the ruins of Greece, especially the Acropolis at Athens. Relate interesting facts in ancient history and mythology. Comparisons, pictures, journeys, etc., as usual.

XVIII. — ASIA.

Study the continent of Asia according to the outline for the study of relief, as given on page 11.

1. Position. Boundaries. Progressive map.

2. Extent. It is the largest of the grand divisions, being about twice as large as North America.

3. Coast. Asia has a very large and irregular coast line.

a. *Oceans.* Arctic, Pacific, Indian.

b. *Seas.* Bering, Okhotsk, Japan, Yellow, China, Arabian, Red, Mediterranean, Black, Caspian, Aral.

c. *Gulfs, Bays.* Tonquin, Siam, Bengal, Aden, Persian, Cambay, Obi.

d. *Straits.* Bering, Tartary, Corea, Malacca, Ormus, Bab-el-Mandeb, Formosa.

e. *Capes.* Chelyuskin (also called North-East), East, Lopatka, Cambodia, Romania, Comorin.

f. *Islands.* The islands of Asia form a continuous chain from the peninsula of Kamchatka to the island of Java. They

contain many active volcanoes. Most of these islands are large and productive. The larger ones are those of the Japanese empire, Formosa, Hainan, Ceylon, Saghalin, New Siberia. Malaysia comprises the continental islands southeast of the mainland of Asia. These will be described under the topic Oceania.

g. *Peninsulas.* These are Arabia, Hindoostan, Malay, Corea, Kamchatka, Asia Minor.

4. The surface consists of mountains, plateaus, deserts and plains. In the northern part is a Great Plain, including the Tundras of Siberia, and also vast forests and rolling prairies. The central portion consists of desert plateaus and mountains. The southern part consists of peninsulas, comprising tablelands, valleys and plains. The greater partof Asia is mountainous and the grand division as a whole is several hundred feet higher than any other.

a. *Mountain Ranges.* In Asia we find the loftiest range of mountains in the world, viz., the Himalaya, "the abode of snow." Here also we find the Altai, "Golden Mountains," Hindoo Koosh, Thian Shan, Taurus.

b. *Peaks.* The various ranges comprising the Himalaya Mountains contain more than forty peaks over 25,000 feet high. Mt. Everest is 29,000 feet high. It is probably the highest peak in the world. In the regions near Palestine are many mountains, interesting because of sacred historical incidents connected with them. On Mt. Horeb, God appeared to Moses and commanded him to deliver his countrymen; on Sinai God delivered to Moses the law; on Ararat Noah's ark rested after the flood. Other peaks are Hermon, Carmel, Nebo.

c. *Plains.* The Pamir Plateau, called the "Roof of the World," is the highest plateau on the globe. The Desert of Gobi, i. e., "sea of sand," is a barren sandy plain twelve hundred miles long and from five hundred to seven hundred miles

wide in the plateau of Mongolia. Other plateaus are those of Thibet, Iran, and Arabia. The last two contain several deserts. The plateau of Thibet is inhabited by a colony of Buddhist priests. As their settlement is sixteen thousand feet above the level of the sea, it is probably the highest inhabited point in the world.

d. *Interesting Objects.* Western Asia is full of scenes and places connected with Bible history. Besides the mountains already noticed, might be mentioned the "Garden of Eden," and Babylon. The Wall of China is 1250 miles long, nearly as long as the distance from Boston to the Mississippi river It is thirty feet high and fifteen feet wide at the top. Watch-towers are built every three hundred feet. It was built 215 B. C., and is said to have taken several million men five years to build it.

5. Lakes. The lakes of Asia are small and usually salt. Balkash and Baikal are the largest. These are about twice the size of Ontario, or about one-half the size of Maine. Lake Baikal is noted for the violent and sudden storms that sweep over it. Locate also the Aral Sea.

6. Rivers. The northern and southern portions have many rivers. The Obi, Yenisei and Lena are the large rivers of the Arctic slope. Why are they of no commercial importance although they are sometimes five miles wide? Yang-tse-Kiang is the largest river in Asia. It is called by the Chinese the "Son of the Ocean." The Hoang-Ho or Yellow is called "China's sorrow," on account of damage to property and life done by it. It is constantly changing its course. The Ganges has eighty mouths. It annually overflows its banks, so that all the surrounding country is covered with water. It is said to be navigated by more vessels than any other river in the world. The other principal rivers are Amoo, Amoor, Brahmapootra, Cambodia, Euphrates, Tigris, Indus, Irrawaddi, and Mekong. Some of the rivers of Asia, like the Amazon, are subject to

bores. That of the Tsein-tsang is the largest in the world. Waves thirty feet high rush up the river at the rate of twenty-five miles an hour.

7. Soil. India, Farther India and part of China are very fertile; the rest of Asia is either a mountain, a desert, or situated too far north for cultivation.

8. Climate. The temperature varies from many degrees below zero in the north to 125 degrees above zero near the Persian Gulf. Mecca is regarded as one of the hottest places on the earth's surface, while Irkootsk is said to be the coldest inhabited place in the world. In the southern parts of Asia the monsoons or "season" winds blow from the land for six months, causing six months of drought; during the remaining six months they blow from the sea, deluging the land with rain. Owing to this variety of climate, Siberia is called the coldest, Arabia the hottest, and India the wettest country in the world.

9. Productions. a. *Agricultural.* These are as varied as the climate. We find only mosses in the north, but tropical fruits in the south. Most of the food-plants, now found in all parts of the world, originally came from Asia. Most of our choice garden-flowers also came from Asia. Nearly all the tea used in the world comes from Asia, and the finest coffee comes from Arabia. The tropical portions of Asia are renowned for their spices, Arabia for its coffee, and China and Japan for their tea and rice.

b. *Mineral.* Asia is noted for its precious minerals. Large diamonds are found in India; sapphires, rubies and emeralds in Burmah. Gold, silver, iron, tin and quicksilver are also found.

c. *Manufactured.* The different nations of Asia excel in the manufacture of certain articles. These will be spoken of under the different political divisions. All of the people of Asia object to machinery so that all of their work is done by hand.

10. Animals. We find here the same animals that we found in Europe, and also the rhinoceros, elephant, lion, tiger, wild hog, yak, gazelle, hyena, tapir, buffalo, goat, sheep, monkey, etc. All of these are natives of Asia, as well as the horse, camel, ox, and all our barnyard fowls.

11. Races. Three races are found in Asia, the Caucasian, Mongolian and Malay; or called by modern classification, the Aryan and Turanic races. The Mongolian and Malay are divisions of the latter.

12. Occupation. The people are largely engaged in agriculture. The pearl-fisheries on the south-eastern coast and among the islands are very valuable.

13. Political Divisions. Name them.

14. Cities. The cities have narrow, crooked and filthy streets. There are over fifteen cities, each having a population of more than 500,000. Several cities in China have a population of over 1,000,000. The largest cities are Pekin, Canton, Calcutta, Tokio and Bombay.

15. Language and Object Lessons. While moulding the continent of Asia, lead the pupils to see what influence the mountains have in forming the deserts. Describe the sand-storms in the desert, the customs and manners of the different peoples of Asia, the scenery, the animals, the productions and the celebrated mountain-passes. The celebrated Bolan-pass is sixty miles long, and its walls are perpendicular cliffs, often six hundred feet high. Describe the valuable forests of Asia, including the teak, rosewood, ebony, betel, etc. Let the pupils take the following journey, describing all the curious things that would be seen: From the home city to San Francisco, to Yokohama, to Hong Kong, to Saignon, to Bangkok, to Singapore, to Madras, to Bombay, through the Suez Canal and Mediterranean Sea, to Paris, to London, to Liverpool, to New York,

to the home city. Asia is of great interest to us as the cradle of the five principal religions of the world: Christianity, Judaism, Mohammedanism, Buddhism and Brahmanism. Show the peculiar features of each.

XIX. — ASIATIC RUSSIA.

1. Position. Boundaries. Map.

2. Extent. It covers about one-third of Asia, and includes Siberia, Turkestan, and Trans-Caucasia or Georgia. By some geographers Trans-Caucasia is united to Russia in Europe, and the Caucasus Mountains are not called the boundary between Europe and Asia.

3. Coast. a. *Oceans.* Arctic, Pacific.

b. *Seas.* Caspian, Black, Kara, Aral, Bering, Okhotsk.

c. *Gulfs.* Obi, Anadyr, Tartary.

d. *Strait.* Bering.

e. *Capes.* Northeast, now called Chelyuskin, East, Lopatka.

f. *Islands.* New Siberia, Saghalin.

g. *Peninsula.* Kamchatka.

4. Surface. In the north are extensive frozen marshes called Tundras. The eastern and south-western portions are table-lands and plateaus. The remainder is low and level.

a. *Mountain Ranges.* Ural, Yablonoi, Altai, Thian Shan.

5. Lakes. Balkash, Baikal.

6. Rivers. The rivers yield large quantities of fish. The Obi, Yenisei, Lena, and Amoor are the largest rivers.

7. Soil. In Trans-Caucasia and a few other places there is fertile land, but in general the land is barren. Geo. Kennan, in his articles published in the Century, describes the soil as very fertile in places that have always been considered cold and barren.

8. Climate. The cold of winter and the heat of summer are almost unbearable.

9. Productions. a. *Agricultural.* Wheat, barley and oats are extensively raised. In the steppe region of the west are grassy plains, salt marshes, large forests and fertile valleys.

b. *Mineral.* Gold is found in the Ural Mountains. Copper, iron, zinc, platinum and mercury occur. Fossil ivory is found in New Siberia.

10. Exports. The exports are hides, furs, cattle, fish and tallow. An extensive trade is carried on between Pekin and St. Petersburg. From Pekin to Maimaichin by camels, from there through Irkootsk, Tomsk and Tobolsk to St Petersburg by boat in summer, and in winter by sledges drawn by dogs or reindeer. It takes six months for the journey.

11. Inhabitants. Three-fourths of the inhabitants of Siberia are Russians. Many of them are exiles who have been banished from Russia. The steppes in the south are occupied by roving Kirgheez. In the north are many barbarous tribes.

12. Cities. Tobolsk is the capital. Tiflis has a large caravan trade with Persia. Yakootsk is said to be the second coldest city on the globe. Irkootsk is the largest city in Siberia. Tashkend is a large city surrounded by walls.

13. Language and Object Lessons. Give some idea of the exile system. Describe the caravan trade. What is fossil ivory? How can it be found in New Siberia? Comparisons, etc., as usual.

XX. — CHINESE EMPIRE.

1. Position. Boundaries. Progressive Map.

2. Extent. It is only one-fourth larger than the United States, but its population comprises about one-third of the whole population of the globe.

3. Coast. Most of the coast is bold and rocky and frequently visited by terrific typhoons.

a. *Ocean.* Pacific.

b. *Seas.* Japan, Yellow, Blue now called East China, and South China.

c. *Gulfs.* Tonquin, Pechelee.

d. *Straits.* Corea, Formosa.

e. *Islands.* Hainan and Formosa. The products of Hainan are sugar, pearls, coral, wax, gold and silver; those of Formosa are rice, camphor, coal and tea.

f. *Peninsula.* Corea.

4. Surface. Nearly all of the northern part is a barren tract called the "Desert of Gobi," though there is excellent pasture-land in Mantchooria. The western part is situated among the numerous chains of mountains belonging to the Himalaya Range, and thus includes some of the highest plateaus on the globe, that of Thibet being the most noted. The larger part of China Proper is level and fertile.

a. *Mountain Ranges.* Himalaya, Thian Shan, Altai.

b. *Peaks.* See Topic XVIII.

c. *Natural Curiosities.* See Topic XVIII.

5. Lakes. The lakes are small; but most of them are covered with numerous floating gardens, with houses, fields, inhabitants, and domestic animals. Many thousands of people live in this way.

6. Rivers. See Topic XVIII. The Amoor, Hoang Ho, Yang-tse-Kiang are the largest. Si Kiang or Canton is an important commercial river. The Yang-tse-Kiang ranks with the Mississippi and Amazon. Its basin contains a population three times as large as that of the United States. The Imperial Canal is the longest canal in the world.

7. Soil. See Surface.

8. Climate. China has a climate of extremes. It is colder than that of western Europe.

9. Productions. a. *Agricultural.* Tea is the most important production. The value of the tea exported in one

year is $56,000,000. In the northern part are found all the productions of the Temperate Zone; in the south are found rice, cotton, mulberry-tree, sugar-cane, teak, camphor-tree, cinnamon, tobacco and poppy. There is also found here a tree which produces a fruit from which a hard, white tallow is made. It is called the tallow-tree.

b. *Mineral.* China is rich in mineral wealth. Coal, iron and copper are of the finest quality. Gold is found in the valley of the Yang-tse Kiang.

c. *Manufactured.* The Chinese excel in the manufacture of silk, lace, porcelain, wood and ivory carving. The art of printing, paper, gunpowder, the compass and many other useful things were used by the Chinese long before they were known by other nations.

10. Commerce. The commerce is extensive. Tea and silk furnish three-fourths of the exports; opium and cotton two-thirds of the imports.

11. Inhabitants. a. *Race.* The Chinese or Celestials, as they are commonly called, belong to the Mongolian division of the Turanic race. They are industrious and skillful, but filthy in their habits. They have a barbarous custom of bandaging the feet of the girls of the higher castes, so that the shoes of an adult woman measure only three or four inches in length.

b. *Occupation.* Agriculture is the leading industry. On the first day of each year the Emperor plows a furrow with his own hand, in order to show the high esteem in which agriculture is held. Manufacturing, mining and pearl-fishing are also carried on.

c. *Education.* Education is compulsory. Nearly every man can read and write. The women are not educated. The Chinese have no alphabet, but a character for every word. In reading you begin at the back of the book and on the right hand side of the page.

12. Government. The government is an absolute monarchy. The empire is noted for its antiquity and immense population. It includes China Proper, Thibet, Manchooria, Mongolia, Turkestan and Corea. Corea is independent, though paying a small sum each year to China.

13. Cities. Pekin is the capital. Canton and Shanghai are important seaports. Hong Kong belongs to Great Britain. Lassa is the capital of Thibet, and the residence of the Grand Lama, the Buddhist chief priest. It is in the same latitude as New Orleans, but its climate is as severe as that of St. Petersburg. Why? Seoul is the capital of Corea. Other cities are Foo Chow, Han Kow and Tientsin.

14. Language and Object Lessons. Describe the Chinese customs, houses, mode of travelling, etc., all of which are so entirely different from anything seen in the United States. This work is limitless in extent.

XXI. — JAPAN.

1. Position.

2. Extent. The empire contains four large islands, — Yezo, Hondo, Shikoku, Kiushiu, and also 3,850 smaller islands.

3. Coast. The coast line of the larger islands is irregular. It is difficult to approach the shores because of rocks and shallows.

a. *Seas.* Okhotsk, Japan, East China.

b. *Strait.* Corea.

4. Surface. Large, fertile plains border the coast, but the interior is high and rugged. Fujisan is the sacred mountain of Japan. It is the highest mountain, and was once an active volcano. In summer bands of pilgrims, dressed in white, travel to the summit to worship idols. Throughout Japan earthquakes are of common occurrence. In 1703 Tokio was destroyed by an earthquake, when 200,000 persons perished.

5. Soil. The soil is fertile and supports a population nearly equal to that of the United States, although in extent it is only equal to the Middle Atlantic States.

6. Climate. The climate is very mild, much more so than would be expected, owing to the Japan Current. Typhoons frequently occur.

7. Productions. a. *Agricultural.* We find here all the productions of the temperate and torrid zones. Rice and tea are the principal products. There are three celebrated trees in Japan. From the first the Japanese get a gum used in Japan-ware; from the second they get wax for their candles; from the third they manufacture paper.

b. *Mineral.* Gold, silver, coal, iron, tin, copper, etc., are abundant.

c. *Manufactured.* The manufactures are similar to those of China and like them also are excellent in quality. The Japanese excel in the manufacture of steel.

8. Commerce. Tea, silk, rice, fans, lacquered ware and porcelain are the chief exports. Nearly all the commerce is with Great Britain and the United States.

9. Inhabitants. a. *Race.* They belong to the Malay division of the Turanic race, and are noted for their intelligence and progressive spirit. They are rapidly adopting American and European manners and customs. Public schools, colleges, railroads, telephones and telegraphs have all been introduced within a few years.

b. *Occupation.* Agriculture and manufacturing are the leading pursuits.

10. Government. The government is an absolute monarchy. The chief ruler is called the Mikado.

11. Cities. Tokio is the capital and largest city of the empire. Yokohama is the principal seaport. Osaka and Kioto are large manufacturing cities. Osaka has numerous canals and eleven hundred bridges.

12. Language and Object Lessons. Compare the manners and customs of the Japanese with those of the inhabitants of Europe and the United States.

XXII.— BRITISH INDIA.

1. Position. Boundaries. Map.

2. Extent. It comprises Hindoostan, Burmah, and a number of provinces half independent. The Cashmere province or Punjaub is the most important, and celebrated for its sheep and goats. From their wool of fine quality, cashmere shawls are made. Nepaul and Bootan are small, independent provinces. British India is in extent a little more than one-half the size of the United States.

3. Coast. a. *Sea.* Arabian.

b. *Gulfs.* Cutch, Cambay, Martaban, Manaar.

c. *Bay.* Bengal.

d. *Cape.* Comorin.

e. *Peninsula.* Hindoostan.

f. *Islands.* Ceylon is the largest and noted for its pearl-fisheries. The other islands are Nicobar, Andaman, Maldive, Laccadive.

4. Surface. The central portions consist of elevated plateaus. The Himalaya Mountains form the northern boundary. The Eastern and Western Ghauts enclose the Plateau of Deccan.

5. Rivers. The largest rivers are the Indus, Ganges, Brahmapootra, Irrawaddy.

6. Soil. On account of the fertility of the soil, British India is the richest possession owned by any nation.

7. Climate. In the north the climate is temperate; in the south it is tropical. The summer heat in the plains can be endured only by the natives. Violent storms are frequent.

8. Productions. a. *Agricultural.* Nearly all the grains,

fruits and spices of the tropical regions are found here. Rice is the chief article of food. Hindoostan produces large quantities of opium. The banyan tree is celebrated; one tree is said to cover seven acres.

b. *Mineral.* Diamonds are found in the Deccan. Other minerals occur, but the mines are not worked extensively.

c. *Manufactured.* Calico was first made in Calicut. In Burmah excellent bells are made.

9. Commerce. This is extensive and almost wholly carried on with Great Britain by water and caravan.

10. Inhabitants. They are mainly of the Caucasian or Aryan race, though in color nearly black. They are called Hindoos. They are divided into several castes. The Brahmans are the highest, and they are highly educated. The Vedas are the sacred books of the Hindoos. By their teachings all intercourse between the different castes is forbidden. They are an indolent, poor, but contented race.

11. Government. British India is governed by a viceroy appointed by the crown of England. Many of the provinces are ruled by native princes.

12. Cities. The cities of India are numerous and large, but filthy, except in the portions built by Europeans. Calcutta is the capital and largest city. It has the largest commerce of any city in Asia. Bombay is situated on an island by the same name, and is the second commercial city of Asia. Benares is the sacred city of the Hindoos and contains over one thousand pagan temples. Delhi was once the capital of India, having a population of two millions. Other cities are Madras, Rangoon, Mandalay, Hyderabad, Lucknow and Agra.

13. Language and Object Lessons. Throughout India are many interesting cities and objects, which should be described. Give some idea of the teaching of Brahmanism and Buddhism. Describe the birds, the animals, the productions, and the Black Hole of Calcutta.

XXIII. — FARTHER INDIA.

1. Position. Boundaries. Map.

2. Extent. Farther India or Indo-China includes Anam, Cambodia, Siam and the Malay Peninsula. Burmah was annexed to the British Empire in 1886; previously it was included in Indo-China.

3. Coast. a. *Sea.* South China.

b. *Gulfs.* Siam, Tonquin.

c. *Strait.* Malacca.

d. *Capes.* Cambodia, Romania, Buru.

e. *Peninsula.* Malay.

4. Surface. The surface is generally hilly.

5. Rivers. Cambodia or Mekong is the largest river of Farther India. It flows through deep and mountainous gorges. The Meinam is called the Nile of Siam, because it annually overflows its banks. The success of the rice-crop depends upon this overflow.

6. Soil, Climate. These are similar to British India.

7. Productions. See British India. The forests supply bamboo, palm, betel, gutta-percha, rattan, sweet-scented eagle-wood, etc.

8. Government. Anam and Siam are absolute monarchies. Cambodia and Lower Cochin-China are under the protection of the French.

9. Inhabitants. The people of Siam and Anam belong to the Mongolian race; the people of the Malay peninsula to the Malay race. They are gay and fond of amusement, but lazy. They have many peculiar customs, some of them filthy.

10. Cities. Bangkok is the capital of Siam. It contains the finest temple in Farther India. Saigon is the capital of the French possessions. Hue is the capital of Anam. Singapore is situated on an island of the same name. It is the leading tin and spice market of the world and the capital of the British possessions called the Straits Settlement.

XXIV. — PERSIA.

1. Position. Boundaries.

2. Surface. The central part is a table-land crossed by mountains. In the western part are salt-deserts.

a. *Mountains.* Elburz.

3. Soil. Persia is a dry country and a large part of it is barren. Agriculture in a large part of the territory is carried on only by irrigation.

4. Climate. The climate along the Caspian is mild and delightful. In the plains and plateaus the summers are hot and the winters cold.

5. Productions. a. *Agricultural.* Silk is the most important production. Other productions are cotton, tobacco and roses.

b. *Mineral.* There are mines of copper, petroleum, salt and turquoise. The last is peculiar to Persia. Marble is so pure and transparent that it is often used in place of window glass.

c. *Manufactured.* The Persians are especially skilful in the manufacture of silk, shawls, carpets and sword-blades.

6. Inhabitants. They are active, warlike, insincere, immoral, but fond of poetry and generally intelligent.

7. Government. The government is an absolute despotism. The ruler is called the Shah.

8. Cities. Teheran is the capital and largest city. Tabreez is the commercial city of Persia. A large caravan trade is carried on between Persia, India, Turkey and Russia. Meshed manufactures carpets and shawls.

9. Language and Object Lessons. Teach the cause of the peculiar climate. Customs, comparisons, journeys, etc., as usual.

XXV. — AFGHANISTAN, BELOOCHISTAN.

1. Position. They occupy the eastern portion of the Plateau of Iran and are for the most part a desert.

2. Surface. The surface is usually mountainous, but there are many fertile valleys.

a. *Mountain Ranges.* Hindoo Koosh, Suleiman.

3. Soil. In Afghanistan are many fertile spots; in Beloochistan only deserts.

4. Inhabitants. The inhabitants of Beloochistan are barbarous, indolent, cruel and dissolute. The inhabitants of Afghanistan are more civilized and therefore more nearly resemble the Persians.

5. Government. It is an absolute monarchy. Afghanistan is largely under the control of Great Britain.

6. Cities. Kelat is the capital of Beloochistan, and Cabul of Afghanistan.

7. Language and Object Lessons. Same as usual, also show why Great Britain is so anxious to have Afghanistan maintain its independence. Describe the mountain-passes.

XXVI. — ARABIA.

1. Position. Boundaries.

2. Coast. a. *Seas.* Red, Arabian.

b. *Gulfs.* Oman, Aden, Persian, noted for its pearl-fisheries.

c. *Strait.* Bab-el-Mandeb, called "Gate of Tears," because of the great number of shipwrecks that have occurred there.

3. Surface. Along the coast of the Red Sea is a very fertile plain, called in ancient times "Araby the Blest." The rest of Arabia is a great plateau, consisting of hills of naked rocks and plains of drifting sand, dotted here and there with fertile valleys and oases.

4. Climate. It is very dry. On the plains the heat is unbearable. Over the burning deserts sweeps the simoom, a hot wind.

5. Productions. The coast-plain yields coffee, dates, figs, grapes and spices. The rest of Arabia is unproductive. In the

deserts are found fertile spots called oases, where a few palm-trees grow. Arabia is noted for its fine breed of horses. The Arabs think almost as much of their horses as they do of their children, and allow them to live in their tents as a part of the family. They always treat them with great kindness.

6. Inhabitants. Most of the Arabs are called Bedouins. They roam from place to place and for the most part are robbers, though very courteous and hospitable. Their chief wealth is in the large herds of camels which they possess.

7. Government. All the western part of Arabia is under Turkish rule. The rest of Arabia is divided into small states under separate rulers.

8. Cities. Mecca is celebrated as the birthplace of Mohammed and is a sacred city to all believers in the Mohammedan religion. Medina contains the tomb of Mohammed. To both of these cities every Musselman must make a pilgrimage once in his life. Muscat is a wealthy city of great commercial importance. Mocha is a port on the Red Sea and noted for its coffee.

9. Language and Object Lessons. Give some idea of Mohammed and the religion he founded. Describe the deserts and their Bedouin inhabitants. Arabia contains Mt. Sinai and Horeb, and the desert in which the Israelites wandered for forty years.

XXVII. — TURKEY.

1. Position. Boundaries.

2. Extent. Asiatic Turkey includes Asia Minor, Armenia and Syria. This is the most important part of the Turkish Empire.

3. Coast. a. *Seas.* Mediterranean, Black, Red, Marmora, Dead. This last named sea is the lowest body of water in the world. It is 1302 feet below the level of the Mediterranean

Sea. Its waters are so salt that it is said to be almost impossible to sink in them, and so bitter that nothing can live in them. The Jordan river flows into it.

b. *Isthmus.* Suez.

4. Surface. The surface is generally mountainous.

a. *Ranges.* Taurus, Lebanon.

b. *Peaks.* Ararat, Olympus, Ida.

5. Rivers. Euphrates, Tigris and Jordan.

6. Lakes. The most important one is the Dead Sea.

7. Soil. The valleys are suitable for agriculture, and the mountain sides furnish pasturage.

8. Climate. The climate of the northern part closely resembles that of New England; while the climate of the southern part resembles that of Georgia.

9. Productions. We find here the grains and fruits of the temperate zone, and also oranges, figs, olives, and pomegranates.

10. Inhabitants. The inhabitants are of many different nationalities; the Turks are the ruling people.

11. Cities. Damascus is the oldest city in existence, and is the center of a large caravan trade. Smyrna is the commercial port of Turkey. Beyrout is a seaport on the Mediterranean Sea. Bagdad and Aleppo are noted for their caravan trade. Jerusalem was once a magnificent city, but is now of little importance except for its memories and ruins of the past. It contains the tomb of Christ, which is visited annually by thousands of pilgrims.

12. Language and Object Lessons. Describe the Jordan, and the ruins near it. All the mountains, hills, rivers and valleys are connected with scenes and events in the life of Christ, and for that reason are worth studying. Here was the ancient city of Troy. Describe its capture by the Greeks as narrated in Homer's poem, the Iliad. Time could more profitably be spent on the study of Syria as it was than as it

now is. Its history has largely determined the history of all the civilized world, hence it is important for all students to know something of it. Compare the different divisions of Asia, one with another, also compare them with the different divisions of Europe and America.

XXVIII. — AFRICA.

Africa should be moulded and studied in relief, the same as the other grand divisions.

1. Position. Boundaries. Progressive map.

2. Extent. Of the grand divisions, Africa is second in size. Its length and breadth are each about five thousand miles. It is the only grand division stretching across the Torrid Zone. It has a hotter climate, a larger desert, larger and more numerous animals than any other grand division.

3. Coast. Africa is a vast peninsula with an almost unbroken coastline. There are no excellent harbors and few navigable rivers. What effect has that had upon our knowledge of the interior?

a. *Oceans.* Atlantic, Indian.

b. *Seas.* Mediterranean, Red.

c. *Gulfs.* Aden, Guinea,

d. *Strait, Channel.* Bab-el-Mandeb, Mozambique.

e. *Isthmus.* Suez.

f. *Capes.* Bon, Guardafui, Agulhas, Good Hope, Verde. Why was the cape of Good Hope so called?

g. *Islands.* Madagascar is twice as large as Great Britain. It has a fertile soil and a large population. The island furnishes gold, silver, lead, iron, honey, wax and silkworms. The Azores, a group of nine islands, produce wine, brandy, oranges and lemons. The Cape Verde islands consist of fifteen large and several small islands. The Canary Islands belong to Spain. The hot winds from the desert often blow across the islands and

destroy all vegetation. Here is the home of the Canary bird. St Helena is noted as the island to which Napoleon Bonaparte was exiled, and as the place of his death. Ascension Island is near it. East of Madagascar are several islands which produce large quantities of coffee, sugar and spices. Of these Reunion or Bourbon, belonging to France, is famous for its volcano, which serves as a lighthouse. Mauritius belongs to England.

4. Surface. The interior of Africa is a plateau, which is almost completely surrounded by mountains. The plateaus of the south are higher, so that the land slopes toward the north.

a. *Mountain Ranges.* Atlas, Kong, Snow, Cameroon.

b. *Peaks.* Killima-Njaro and Kenia are the highest.

c. *Plains.* Sahara is the largest desert on the globe. Its surface consists of hills and valleys covered with fragments of rocks, coarse gravel, hard baked earth, dry lakes covered with salt, and fine drifting sand. It is about the size of the United States. Some portions of it are below the surface of the Mediterranean and it is now proposed to dig a canal to let in the waters of the sea, hoping to increase the amount of rainfall and thus make the rest of the desert fertile. If this could be accomplished, the climate of France, Spain and Italy would undergo a great change. It would then be deprived of the hot winds from the desert, which now make the climate of those countries so tropical. There is reason to believe that at one time nearly all the desert was fertile and the mountains covered with forests. After the forests were cut down by the inhabitants, to enable them more easily to defend their flocks, the rainfall gradually ceased and then the desert began. There are many oases; the largest is Fezzan. The other important desert is Kalihari.

d. *Curiosities.* Africa has been so little explored that its curiosities are not known. There are many large cataracts, that of Victoria is the most noted. The Zambesi river

makes a perpendicular plunge of four hundred feet. Table Mountain in Cape Colony is noted. Egypt abounds in ruins and monuments, including the celebrated pyramids.

5. Lakes. The lakes are commercially unimportant. During the dry season many of the smaller ones either dry up entirely or become mere stagnant pools. The largest are Victoria, Tchad, Nyassa, Tanganyika. Victoria is said to be the largest fresh-water lake on the globe.

6. Rivers. Africa has some large rivers, but because of their cataracts and lack of harbors they are commercially unimportant. The largest and most important river is the Nile. It annually overflows its banks, bringing down rich soil from the mountains, making the most fertile valley in the world, which is called the "Gift of the Nile." A peculiar feature of this river is that it diminishes in size as it approaches the sea. This is owing to the large amount of water that is used for irrigation and that is lost by evaporation, and also to the fact that in all the last part of its course it receives no tributary. The Congo or Livingstone is another important river in Africa. In its basin has been established the Congo Free State. It was formed by representatives of several European states. The king of Belgium is the president of the corporation. Stanley is the governor of the state. The other rivers are Niger, Zambesi, Orange.

7. Soil. The parts along the shores, except along the coast of Sahara, are very fertile. The interior is but little known, but so far as known it consists of extensive barren regions, alternating with fertile valleys.

8. Climate. Owing to its position in the Torrid Zone and to the large number of sandy deserts, the heat is unbearable. In the Sahara the temperature is often 150 degrees above zero in the daytime, while at night it grows so cold that the water freezes. Throughout a large part of Africa there are

only two seasons. For six months it rains and for six months it is dry.

9. Productions. a. *Agricultural.* There are large forests of baobab, teak, mangrove, ebony and India-rubber. The north-western portions of Africa produce acacia, myrrh, cinnamon, and other spices, besides cotton, coffee, and sugar-cane.

The date-palm flourishes along the borders of the Great Desert. Some of the baobab trees are thirty feet in diameter, while their branches are larger than most of the trees with which we are familiar in America.

b. *Mineral.* Gold is abundant along the Guinea coast. There are important diamond-fields in Grigua Land, along the Orange river, Salt, iron and saltpetre are also abundantly found.

c. *Manufactured.* In tanning and dyeing leather the peo- of Morocco are very skillful. Leather and oils are the only important manufactures.

10. Commerce. The exports are gold, ivory, Morocco leather, dates, palm-oil and ostrich feathers.

11. Improvements. Africa cannot much longer be called the Dark Continent, if railways continue to be built. In Egypt, Algiers and Cape Colony there are several thousand miles of railway. The Suez Canal connects the Red and Mediterranean seas. It is one hundred miles long and has a depth of twenty-four feet and a width of seventy-five feet at the bottom. It was built by the French, but is now under the control of the English.

12. Animals. Africa is noted for its large and ferocious animals. The giraffe, hippopotamus, chimpanzee, zebra, quagga, and gnu are all natives of Africa. Here also we find the elephant, rhinoceros, hyena, ostrich, ibis, flamingo, parrots, crocodiles, enormous serpents and millions of insects. The tsetse is a small fly, whose bite is certain death to a

horse, dog or ox. The termites or white ants build conical-shaped hills, sometimes twenty feet in height, in groups or villages. Each house is divided into chambers or galleries. The natives of Africa use them for food.

13. Inhabitants. Moors live in the Barbary states; Arabs in the Great Desert; Negroes in the rest of Africa. Among the natives we find the greatest ignorance and vice.

15. Political Divisions. The independent states of Africa are Morocco, Abyssinia, Zanzibar, Orange Free State, Liberia, Congo Free State, and the South African Republic. Liberia was founded as a colony for freed slaves from the United States. Its capital is Monrovia, named after President Monroe. The British Possessions are Cape Colony, Natal, Sierra Leone, the Gold Coast or part of Upper Guinea, the Niger Delta, and a few other places. Zululand and Caffraria are subject to Great Britain, but ruled by native chiefs. Egypt is nominally subject to Turkey, but practically subject to Great Britain. The French Possessions are Algeria, Tunis, Senegambia, part of Soudan. To Portugal belong the Madeira, Azores, and Cape Verde Islands, also a strip along the western and eastern coasts in Lower Guinea and Mozambique.

16. Cities. Cairo is the capital of Egypt and the largest city in Africa. Alexandria was named after Alexander the Great. It is the oldest city in Africa and contains interesting remains, as Pompey's Pillar. At one time it contained the largest library in the world and had a population of 650,000. Tananarivo is the capital of Madagascar and a large manufacturing city. Khartoom is the center of a large caravan trade. Zanzibar, on an island of the same name, is the chief market in the world for ivory. Other cities are Tunis, Tripoli, Morocco, Algiers, Fez, Cape Town, Suez, Port Said.

17. Language and Object Lessons. Three thousand years ago nearly all the learning of the world was contained in

Egypt, from thence it spread to other parts of the world. Compare its condition then with its condition now. Describe the "Ship of the Desert," the mirage, the sand-storms, the cause of the desert, the Sphinx, the pyramids, the search for the source of the Nile, grain-sowing in the valley of the Nile, the Suez Canal, the productions, the animals, including the white ants and tsetse; the customs of the inhabitants, including their superstitions and human sacrifices; the life and labors of Livingstone, Gordon and Stanley. Contrast Nubia, formerly Ethiopia, the seat of powerful and populous nations, with Nubia of to-day, only inhabited by barbarous tribes. It seldom rains in Egypt; why is the valley so fertile? Where are the rough diamonds from Africa sent? Why has England so much to do with Egyptian affairs?

XXIX. — OCEANIA.

1. Position. Oceania includes Australia and most of the islands of the Pacific.

2. Divisions. Oceania is divided into three divisions. 1. Malaysia, which includes the Sunda islands, viz.: Sumatra, Borneo, Java; Philippine, Celebes and Moluccas or Spice Islands. 2. Australasia, which includes the continent of Australia and also Melanesia. Melanesia includes Papua, New Britain, Solomon, New Hebrides, Santa Cruz, New Caledonia, Loyalty, New Zealand, Tasmania and many small islands. 3. Polynesia, meaning many islands, which includes all the rest of Oceania. The important islands of this group are the Sandwich or Hawaiian Kingdom, Feejee, Caroline, Ladrone, and Samoa or Navigator islands.

3. Coast. a. *Oceans.* Pacific, Indian.

b. *Seas.* South China, Java, Arafura, New Zealand.

c. *Gulf.* Carpentaria.

d. *Straits.* Malacca, Macassar, Sunda, Torres, Bass.

4. Surface. Australia resembles Africa in surface, i. e., it has mountains along the coast and plains in the interior. Tasmania, New Zealand, and the Sunda islands have a mountainous surface. Most of the islands of the Pacific are volcanic, many of them containing active volcanoes; others are of coral formation.

a. *Peaks.* Tomboro in the island of Sumbawa is a large active volcano. During some of its eruptions, houses forty miles distant have been crushed by the weight of ashes. Mauna Loa and Kilanea in Hawaii are large volcanoes. During eruptions the lava from these mountains flows fifty miles to the sea, so that the ocean is heated for miles around, killing fish by the millions. In 1886, a chain of volcanoes in New Zealand suddenly became active, burying whole villages with all their inhabitants.

b. *Natural Curiosities.* See Grade IV. These islands are so covered with curious and interesting things that it would fill a volume to describe them. You should read about them.

5. Rivers. The rivers of the islands are unimportant. The Murray and Darling are the largest rivers of Australia.

6. Soil. In most of the islands the soil is very fertile. The interior of Australia is barren, but the south-eastern part is productive.

7. Climate. The East Indies are visited by terrible typhoons, and along the shores of many islands it is unhealthy to live, but it is delightful in the interior. The lack of rain in parts of Australia has a great influence upon the climate, causing sudden and great changes in the temperature. The climate, however, is healthful.

8. Productions. a. *Agricultural.* The East Indies produce coffee, tropical fruits, all kinds of spices, and sweet-scented sandal-wood. There are found in Australia several thousand varieties of trees and plants not found elsewhere.

Ferns grow to the size of trees. All grains and fruits have been introduced and are flourishing. None were found there when Australia was discovered.

b. *Mineral.* Australia is rich in gold, silver, copper, iron and tin. In Borneo are found diamonds; in Sumatra, gold, sulphur, petroleum; in Tasmania, gold, precious stones and coral; in Feejee, mother of pearl.

9. Commerce. Coffee and spices are the chief exports of the islands; gold and wool of Australia.

10. Animals. Few of the animals common in other countries are found here, and few of those found here are common elsewhere. The kangaroo, ornithorynchus and emu are the principal animals.

11. Government. The government of Australia is similar to that of Canada. Most of the islands are subject to foreign powers. In 1885, the Australasian Federation was founded. This includes Victoria, Queensland, South Australia, West Australia, and Tasmania. New South Wales and New Zealand are free to enter the Federation at any time. We have then a new nation, whose area is nearly as large as that of the United States.

12. Foreign Possessions. England owns Australia, New Zealand, Tasmania, Feejee and a part of Borneo and New Guinea. Borneo is about the size of Texas and therefore one of the largest islands in the world. Holland owns Java, Celebes, Spice islands, and the greater part of Papua, Sumatra and Borneo. Java is densely populated, and called the "Land of Fire," on account of its numerous volcanoes, lakes of fire, and "valleys of death." Spain owns the Philippine, Caroline and other islands. France owns New Caledonia, Marquesas, Society and other islands. Germany owns the Bismarck Archipelago, and a part of New Guinea. The Sandwich islands are independent.

13. Cities. Melbourne is the commercial city of Australia, and Sydney is the oldest city. Batavia, the capital of Java, is an important commercial city. Manilla, the capital of the Philippine islands, exports manilla hemp, used in making rope. Honolulu is the chief city of the Sandwich Islands.

14. Language and Object Lessons. Give language lessons upon the customs of the inhabitants, the wonders of nature and the peculiar animals. Give object lessons on coral; its manner of forming islands; on cinnamon, cloves, pepper, nutmegs, mace, eucalyptus or gum-tree, kangaroo and ornithorynchus.

GRADE VIII.

GEOGRAPHY REVIEWED.

This review should be more than a rehearsal of knowledge already acquired. The facts already learned should be classified and compared, new facts should be taught and new points made clear. As a preparation for this work every teacher should study such books as Redway's Manual of Geography, Jackson's Astronomical Geography, Frye's Child and Nature, King's Methods and Aids in Geography, Crocker's Methods of Teaching Geography, Carver's How to Teach Geography.

1. Taking the earth as the standard, teach the relative position and size of the other planets of the solar system. Have the pupils observe the apparent motions of the sun, moon and stars, and report upon them. In this connection many geometrical terms must be illustrated and made clear, such as: a point, a line, a surface, a plane, a circle, a circumference, a radius, a diameter, a solid, a sphere; also astronomical terms, such as zenith, nadir, celestial hemisphere, equinox, solstice, declination, ecliptic.

2. Teach the position of the pole-star in reference to observers at different points, as, on the equator, on the tropic of Cancer, in the home city, at the north pole.

3. Seasons, Day and Night. Use a circular table in the middle of which mark the sun. The flat table represents the plane of the earth's orbit. Place the earth at the position of the first equinox, when day and night are equal all over the globe and the sun above the equator. Show that the climate of nearly all the United States would be neither hot nor cold and that the time is March 21, known as the Spring Equinox. Move the earth one-fourth around the table; the time is the 21st of June. The sun has now moved to its most northern point and appears to stand still. This is called the Solstice or Solar Stand. Show how the climate has been growing gradually warmer until it is summer. Now move the earth to the position of the Autumn Equinox and then to the Winter Solstice, showing clearly how our changes in climate are produced. At the same time show the equal length of the day and night at the time of the Spring Equinox, the long days of the Summer Solstice, again the equal length of the day and night of the Autumn Equinox, and the short days of the Winter Solstice. Show what is the effect at the same time in other portions of the globe outside of the United States, such as in the Arctic regions or in the Southern Hemisphere. Lead the pupils to notice when the sun rises north of a point directly east of them and sets south of a point directly west. Call attention also to the reverse. Do not fail to illustrate the greater heat from rays falling vertically than obliquely. In this connection also teach *why* it is colder on a high mountain, though it may be under a vertical sun. The children should also be taught that the rays of light are not themselves visible, and from it show the cause of twilight and the reason why the sun's rays cannot be seen at night, although going past the earth.

4. Moon's Phases. Illustrate by means of a lamp and two globes, one larger than the other, the phases of the moon and the cause of eclipses.

5. Zones. Show how they are caused by the inclination of the earth's axis. Show that if the earth's axis was vertical to the rays from the sun, (1), day and night would be equal all over the earth; (2), there would be no change of seasons.

6. Longitude and Time. Show the relations of one to the other and give practice in determining the difference in time when the difference in longitude is known or the reverse. Clearly explain also the Standard Time Sections. Have the pupils compare the latitude and longitude of the important cities with the home city. When they observe that the latitude of two cities is nearly the same, but the climate different, train them to discover the cause or causes. Show them why the length of the degrees of latitude are always the same, while the length of the degrees of longitude varies.

7. Winds and Waves. Show the cause of tides and explain why some places have higher tides than others. Study the cause of winds and ocean currents. Show why they blow or flow in certain directions rather than in others. Locate and discover the cause of the "zone of calms." Let the class determine what winds and currents would be favorable for certain voyages to be taken in imagination. Show the use of the winds and currents in helping trade and commerce and in modifying the climate of different regions of the earth's surface. Show the cause and result of "land and sea breezes." Show also how high mountains and the configuration of the coast produce local currents of air and water.

8. Climate. Show how the climate is effected by latitude, by elevation of the land, by the slope of the land, by the nearness to the sea, by the prevailing winds, by the ocean-currents.

Train the pupils to determine for themselves what the

climate of any grand division must be by studying the things that effect it.

9. Life. Show how the plant life and animal life of any place depends largely upon climate. Teach that the most important life upon the earth is that of the human family.

Show how the human family is divided into four races, — the Aryan, the Semitic, the Turanic, the Hamitic or Negro; these races into divisions and the divisions into sub-divisions. Show the location of the different divisions and the causes that have differently effected their development.

10. Occupation. Study the different occupations and determine what natural advantages confine them to the different localities.

11. Religion and Government. Study the form of religion and government of the different nations, for much of a nation's progress in civilization depends upon them.

12. Commerce. Take the important commercial centers of the different countries and find out what articles are exported from each as well as what are imported into each. Determine the means of transportation from each one of these centers. Compare the mode of transportation in the United States and Europe with that found in Asia and Africa.

13. Outline Maps. Throughout these Topics you will notice that much stress is put upon *progressive map-drawing*. Map-drawing for the sole purpose of drawing a map is a waste of time. Maps should be drawn only for the purpose of firmly fixing some important point. Do not spend more time in teaching complicated construction lines, than is required to teach the entire subject of any grand division. Progressive outline maps can now be secured at a small cost, which any ingenious teacher can use in many different ways. The best maps of this kind which we have seen are published by D. C. Heath & Co., of Boston. Use such maps for pro-

gressive work, for memory work, for showing relief by suitable coloring, etc.

14. Books of Reference. A very full list of all books pertaining to the literature of geography can be found in King's "Methods and Aids in Geography." The following list has been taken, by permission of Prof. Redway, from his "Manual of Geography," published by D. C. Heath & Co.

GEOGRAPHICAL READING.

WITH the multitude of books of travel that are poured out upon the public from a score of publishing houses, there should be no dearth of reading. Books of sterling value, however, are not numerous; and many very popular books, while they are fascinating because of their vivid word painting, are worthless so far as geographical merit is concerned. The following list might easily be expanded many times its present length, but it is doubtful if its value would be materially increased.

BOOKS EVERY TEACHER SHOULD OWN.

The latest series of text-books on geography.	
Primer of Geography. *Grove.*	Appleton & Co.
Elementary Physical Geography. *Geike.*	" "
First Book of Geology. *Shaler.*	D. C. Heath & Co.
Astronomical Geography. *Jackson.*	" "
Comparative Geography. *Karl Ritter.*	Van Antwerp, Bragg & Co.
Typical Studies in Physical Geography, — a series of photographic views.	D. C. Heath & Co.
Geography, Historical, Physical, etc. *Johnston.*	Stanford.
Earth and Man. *Guyot.*	
Child and Nature. *Frye.*	Hyde Park Pub. Co.
Pocket Atlas of the World.	Ivison, Blakeman & Co.

METHODS OF TEACHING GEOGRAPHY.

Child and Nature. *Frye.*	Hyde Park Pub. Co.
The Teaching of Geography. *Geike.*	Macmillan.
Methods of Teaching Geography. *Crocker.*	Boston Supply Co.
How to Study Geography. *Parker.*	Appleton & Co.
How to Teach Geography. *Carver.*	
Teacher's Supplement to First B'k of Geol. *Shaler.*	D. C. Heath & Co.
Methods and Aids in Geography. *King.*	Lee & Shepard.

Elements of Pedagogy. *White.*	Van Antwerp, Bragg & Co.
Topics in Geography. *Nichols.*	D. C. Heath & Co.
How to Use Globes. *Brownell.*	Andrews & Co.
Essentials of Geography. *Fisher.*	
Talks on Teaching. *Patridge.*	Kellogg & Co.
Manual of Methods. *Hopkins.*	Lee & Shepard.

General Works of Reference.

Encyclopædia Britannica.
Johnson's Cyclopedia.
New American Cyclopedia (with supplements).
Lippincott's Gazetteer.
Stanford's Compendium of Geography and Travel. 6 vols.
Keith Johnston's Geography, Historical, Physical, and Descriptive.

Dana's Geology.	Ivison, Blakeman & Co.
Le Conte's Geology.	Appleton & Co.
Geike's Geology.	" "
Dictionary of Altitudes. *Gannet.*	U.S. Geol. Survey.
Boundaries of the States and the United States. *Gannet.*	" "

Special Works of Reference, — Physical Geography.

The Earth. *Élisée Reclus.*	Harper & Bros.
The Ocean. *Élisée Reclus.*	" "
Physical Geography of the Sea. *Maury.*	
Elementary Physical Geography. *Geike.*	Macmillan.
Physiography. *Huxley.*	Appleton & Co.
Cosmos. *Humboldt.*	
Volcanoes. *Judd.*	Appleton & Co.
Earthquakes. *Milne.*	" "
Forms of Water. *Tyndall.*	" "
Weather. *Abercromby.*	" "
American Weather. *Greely.*	Scribner & Co.
Great Ice Age. *James Geike.*	Appleton & Co.
Climate and Time. *Croll.*	" "
Geological Survey of Idaho and Wyoming. *Hayden.*	U.S. Geol. Survey.
The Geological History of the Grand Cañon. *Dutton.*	" "
Lake Lahontan. *Russell.*	" "
Three Cruises of the Blake. *Agassiz.*	Houghton, Mifflin & Co.

Lake Bonneville. *Gilbert.*	U.S. Geol. Survey.
The Arid Region. *Powell.*	" "
The Ice Age in North America. *Wright.*	Appleton & Co.
Physical Geography. *Somerville, Mrs.*	
Handy Book of Meteorology. *Buchan.*	Longmans & Co.
Depths of the Sea. *Thomson.*	Macmillan.
Coral Islands. *Dana.*	
Physical Geography of the Mississippi River. *Redway.*	D. C. Heath & Co.
Geography of Coast Lines. *Lawson.*	
Geography of River Systems. *Lawson.*	
Climatic Changes of Later Geological Times. *Whitney.*	Little & Brown.
The United States, Physical and Statistical. *Whitney.*	" "

Maps, Atlases, and Globes.

Stieler's Atlas (new ed. 1889–90).
Johnston's (Keith) Royal Atlas (new ed. 1888).
Johnson's (Ruddiman) Atlases.
Andree's Atlas (new ed. 1887).

The foregoing are foreign publications. The atlases vary in price from $10 to $40. Of these, Andree's, price about $12, is a marvel of mechanical execution, and is one of the best ever produced. All foreign atlases are defective in American geography.

Bradley's Atlas.	Bradley & Co.
Cram's Atlases.	Cram.
Rand & McNally's Atlas and Shipper's Guide.	Rand & McNally.
Descriptive Atlas.	Ivison, Blakeman & Co.
Appleton's Atlas of the United States.	Appleton & Co.

Of the foregoing, the Descriptive Atlas, price about $5.00, and Appleton's Atlas of the United States, price $1.50, are the most available for teachers' use. The former is a general atlas, very complete in descriptive geography, and with most excellent maps of the states and territories. The latter embraces the states of the United States only, and contains very valuable statistical matter.

There are but few good wall maps published. Those which are respectable in geographical features are generally wanting in pedagogical qualities, and many of those which have been compiled for their pedagogical value are thoroughly disreputable in every other respect. The following are among the better class: —

Berghaus Physical Map of the World, — one of the best ever published.
Guyot's Physical Maps.
Stanford's Wall Maps.
Johnson's (Ruddiman) Wall Maps.
Rand & McNally's Wall Maps.
Andrews' Globes. The 18-inch globe on high stand is a very desirable one. *Johnston (Keith).* Andrews & Co.
Joslin's Globes. D. C. Heath & Co.
The Stellar Tellurian. " "
The Cosmosphere. *Bailey.* Bailey.
Progressive Outline Maps. D. C. Heath & Co.

The last-named maps will be found invaluable in studying geography and history. They may be edited either as physical, political, or historical maps.

Relief Maps, Models, Photographic Studies, etc.

Geological Models and Studies. *Shaler.* D. C. Heath & Co.
Relief Maps of the Continents. *King.*
" " " " " *Frye.*
Relief Maps showing Progressive Effects of Earth Sculpture. *Davis.*
Typical Studies in Physical Geography. *Redway.* D. C. Heath & Co.

The last-named series embraces a large number of photographic studies in orography, earth-sculpture (erosion, corrasion, and sapping), vulcanology (both selenic and telluric), to which will shortly be added photo-relief maps of the continents.

Mathematical and Astronomical.

Popular Astronomy. *Newcomb.* Harper & Bros.
The New Astronomy. Langley.

Astronomical Geography. *Jackson.*	D. C. Heath & Co.
How to Use Globes. *Brownell.*	Andrews & Co.
Primer of Astronomy. *Lockyer.*	Appleton & Co.
Traité des Projections des Cartes Géographique.	Germain et Cie., Paris.
Mathematical Geography. *Clarke.*	(In Encyclopædia Britannica.)

EXPLORATION.

Arctic Explorations.	*Kane.*
Open Polar Sea.	*Hayes.*
Arctic Voyages.	*Nordenskiöld.*
In the Arctic Seas.	*McClintock.*
Three Years of Arctic Service.	*Greely.*
African Explorations.	*Livingstone.*
The Voyages of Captain Cook.	*Kippes.*
Stanley and the Congo.	*Packard.*
Australia.	*Fitzgerald.*

NORTH AMERICA.

North America.	*Hayden and Selwyn.*
Mexico.	*Ober.*
California, Oregon, and the Sandwich Islands.	*Nordhoff.*
Our Arctic Province.	*Elliott.*
Two Years Before the Mast.	*Dana.*
Geological Surveys of Wyoming and Idaho.	*Hayden* (U.S. Geol. Sur.).
Rambles in Wonderland.	*Stanley.*
California of the South.	*Lindley.*
The Great Fur Land.	*Robinson.*
The Apache Country.	*Ross Browne.*
The Great Lone Land.	*Butler.*
The Wild North Land.	"
Publications of U.S. Geol. Survey.	

SOUTH AMERICA.

Capital Cities of South America.	*Curtis.*
Journey in Brazil.	*Agassiz.*
Up the Amazon and Madeira.	*Matthews.*
Chili.	*Boyd.*
Boy Travellers in South America.	*Knox.*

Dutch Guiana.	*Palgrave.*
Argentine Republic and Paraguay.	*Page.*
Peru.	*Squier.*
Adventures in Trinidad and Up the Orinoco.	*Kingston.*
Travels.	*Von Humboldt.*
Forests of Guiana.	*Brett.*

EUROPE.

Guide Books.	*Baedecker.*
'Walks' in London, Rome, Venice, etc.	*Hare.*
Land of the Midnight Sun.	*Du Chaillu.*
Hours of Exercise in the Alps.	*Tyndall.*
Untrodden Spain.	*Rose.*
Picturesque Holland.	*Havond.*
Travels in Greece and Russia.	*Bayard Taylor.*
Northern Travels.	" "
Views Afoot.	" "
Iceland.	" "
Irish Homes and Irish Hearts.	" "
Scotland and the Scotch.	*Sinclair.*
Zigzag Journeys in Europe.	*Butterworth.*
Turkey and the Turks.	*Cox.*
Up the Volga to the Fair of Nijne Novgorod.	*Munro-Butler-Johnstone.*
Austria-Hungary.	*Kay.*

ASIA.

Travels in Siberia.	*Kennan.*
Lands of the Saracen.	*Bayard Taylor.*
India and Its Millions.	*Prime.*
The Wonderful City of Tokio.	*Greey.*
Overland Through Asia.	*Knox.*
The Middle Kingdom.	*Williams.*
Central and Eastern Arabia.	*Palgrave.*
Persia and the Persians.	*Benjamin.*
China and the Chinese.	*Nevins.*
English Governess in Siam.	*Leonowens.*
Our Colonies and India.	*Ransome.*
Ride to Khiva.	*Burnaby.*
Roof of the World.	*Gordon.*

Life and Travel in India.	*Leonowens.*
Japan.	*Reiss.*
Malacca and Indo-China.	*Thompson.*
Land of the White Elephant.	*Vincent.*
Travels in Bokhara.	*Burnes.*

AFRICA.

See also EXPLORATION.

Travels in Africa.	*Denham.*
Sailing on the Nile.	*Laporte.*
Life in the Desert.	*Du Couret.*
Lake Regions of Africa.	*Gedde.*
My Apingi Kingdom.	*Du Chaillu.*
Journey into Ashango Land.	"
Lost in the Jungle.	"
Equatorial Africa.	"
Country of Dwarfs.	"
Stories of the Gorilla Country.	"
Nile Tributaries of Abyssinia.	*Baker.*
First Footsteps in Africa.	*Burton.*
Heart of Africa.	*Schweinfurth.*
Seven Years' Service on the Slave Coast.	*Huntley.*
Through the Dark Continent.	*Stanley.*

AUSTRALASIA AND POLYNESIA.

Coral Islands.	*Dana.*
Australasia (Stanford's Compend. of Travel).	*Wallace.*
Australasia.	*Fitzgerald.*
Bush Life in Queensland.	*Grant.*
Across Australia.	*Warburton.*

JUVENILE.

Young America Abroad (series).	*Adams* (Oliver Optic).
The 'Rollo' Books (series).	*Abbott.*
The Boy Travellers (series).	*Knox.*
Knockabout Club (series).	*Stephens.*
New Way Round the World.	*Coffin.*
Zigzag Journeys (series).	*Butterworth.*

Eyes and No Eyes.	*Barbauld, Mrs.*
Round the World, by a Boy.	*Smiles.*
What Darwin Saw.	
Seven Little Sisters.	*Andrews.*
Each and All.	"
Life and Her Children.	*Buckley.*
Winners in Life's Race.	"
Life in the North.	*Schwatka.*
Alaska's Great River.	"
Little Folks of Other Lands.	*Chaplin and Humphrey.*
Family Flights.	*Hale.*
Fairy Land of Science.	*Buckley.*
Land of the Midnight Sun.	*Du Chaillu.*
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Hans Brinker.	*Dodge.*
Sea and Sky.	*Blackiston.*
Little People of Asia.	*Miller.*
The Young Llanero.	*Kingston.*
All Aboard for Sunrise Lands.	*Rand.*
" " " Lakes and Mountains.	"
Up the Tapajos.	*Ellis.*
Lost in the Wilds.	"
The World by the Fireside.	*Kirby.*
Science for the Young.	*Abbott.*

NEWSPAPERS AND MAGAZINES.

American Notes and Queries.
Science.
Supplement to Scientific American.
Nature.

The Sunday editions of the better class of metropolitan daily papers usually contain much interesting geographical information, which is far more trustworthy than that obtained from ordinary tourists' books of travel.

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THESE outlines are for the use of the pupil, and are based on the assumption that map-drawing should be taught as a means, and not as an end; that its purpose is to assist the mind in acquiring and fixing geographical facts, and that to memorize the construction lines of other methods and the hundreds of nameless projections and indentations of a tortuous coast-line is a waste of time and of nervous energy which would be better employed in studying important and interesting particulars concerning the physical features, climate, products, etc., of the interior.

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(*c*) In connection with the study of Ancient History, these maps may be used to represent the location of ancient tribes and barbarous hordes of men, the provinces of ancient empires, the distribution of territory after conquests, etc., etc.

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5. **Economy in price.** These maps cost the pupil two cents each. Several times that amount is usually expended for paper required for the practice in producing a satisfactory map by other methods.

DIRECTIONS FOR THE USE OF THE PROGRESSIVE OUTLINE MAPS.

MANY ways of using the **Progressive Outline Maps** will suggest themselves to teachers. A practical teacher who has used them for some time has kindly prepared for us the following directions descriptive of his own method. These directions are for advanced classes, and include the less within the greater.

Teachers in the lower grades can readily modify or omit as the condition of their classes may demand. Colored inks and pencils are recommended.

The great object of the **Progressive Outline Maps**, as of all map-making, is to help the pupils to remember the important facts of geography. Maps should therefore be developed in connection with the subject as it is studied.

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1. The pupil now traces the outline with pen or pencil, and afterwards reads the same as a lesson in cipher, telling where the country is with reference to zone circles, other grand divisions, and the oceans bordering upon it; also mentioning its general shape, the important projections and indentations.

He next prints their appropriate names, against the features, or, if a member of a lower class, writes them. Two or three short lessons in printing, with a few minutes' practice, will greatly facilitate this work, and enable the pupil to present a nicely made map.

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